ORDER NO. DAD84080099C0

A-2

Service Manual

Turntable System
SL-F1

Color	Area
(S)	[M] .....U.S.A.
(S)(K)	[E] .....Switzerland and Scandinavia.
(S)	[EK].....United Kingdom
(S)	[XL].....Australia
(S)	[EG] ....F.R. Germany
(S)	[EB].....Belgium
(S)	[EH].....Holland
(S)	[EF].....France
(S)	[Ei] .....Italy
(S)	[EC].....Czechoslovakia
(S)(K)	[XA].....Southeast Asia, Oceania, Africa, Middle Near East and Central South America

Color

(S) ..... Silver Type
(K) ..... Black Type

T4P is the standard mark for plug-in-connector type. Products carrying this mark are interchangeable and adaptable among each other.

English

Specifications

■ General

Power supply: For U.S.A.: 120V AC, 60 Hz
For Australia: 240V AC, 50 Hz
For continental Europe: 220V AC, 50 Hz
For others: ~110-120/220-240V, 50 or 60 Hz

Power consumption: 6 W

Dimensions: (W×H×D) 31.5 × 9.2 × 35 cm (12-13/32" × 3-5/8" × 13-25/32") (65.5 cm depth when drawer is out.)

Weight: 5.5 kg (12.1 lb.)

■ Turntable section

Type: Front loading type
Fully automatic turntable
Auto start
Auto return
Auto size select
(for 30 cm (12") and 17 cm (7"))

Drive method: Belt drive

Motor: DC motor

Drive control method: DC servo control

Turntable platter: Aluminum die-cast
Diameter 30 cm (12")

Turntable speeds: 33-1/3 rpm and 45 rpm

Wow and flutter: 0.045% WRMS (JIS C5521)
±0.06% peak (IEC 98A Weighted)

Rumble: −45 dB (IEC 98A Unweighted)
−70 dB (IEC 98A Weighted)

■ Tonearm section

Type: Static balanced type, straight tonearm
4-pivot gimbal suspension

Effective length: 20 cm (7-7/8")

Tracking error angle: +0°36' (at the outer groove of 30 cm (12") record)
+3°18' (at the inner groove of 30 cm (12") record)

■ Cartridge section (Except for U.S.A.)

Type: Plug-in connector type moving magnet stereo cartridge

Magnet circuit: ALL laminated core

Frequency response: 10 Hz to 40 kHz

Technics

Matsushita Engineering and Service Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box. 774
Honolulu, Hawaii 96808-0774

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.
Ave. 65 De Infanteria, KM 9.7
Victoria, Industrial Park
Carolina, Puerto Rico 00630

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Output voltage:	2.5 mV at 1 kHz, 5 cm/s. zero to peak lateral velocity (7 mV at 1 kHz, 10 cm/s. zero to peak 45° velocity [DIN 45 500])
Channel separation:	22 dB at 1 kHz
Channel balance:	Within 2 dB at 1 kHz
Recommended load impedance:	47 kΩ~100 kΩ
Compliance (dynamic):	12 × 10^{-6}cm/dyne at 100 Hz
Stylus pressure range:	1.25 ±0.25 g (12.5 ±2.5 mN)
Weight:	6 g (cartridge only)
Replacement stylus:	EPS-30CS

Specifications subject to change without notice.
Weight and dimensions shown are approximate.

- The power supply for this unit varies depending upon the areas. Also, the parts used for power supply are different. So, refer to the circuit diagram and replacement parts list.
  - ★ 120V (60 Hz) for U.S.A.
  - ★ 220V (50 Hz) for Continental Europe.
  - ★ 240V (50 Hz) for United Kingdom and Australia.
  - ★ 110V-120V/220V-240V (50/60 Hz) for other areas.
  - ★ [XA] area is provided with voltage selector.

Deutsch

TECHNISCHE DATEN

■ Allgemeine Daten

Stromversorgung:	220V, 50 Hz Wechselstrom
Leistungsaufnahme:	6 W
Abmessungen: (B×H×T)	31,5 × 9,2 × 35 cm (65,5 cm tief, wenn die Schublade herausgezogen ist.)
Gewicht:	5,5 kg

■ Plattenteller

Typ:	Frontladetyp Automatischer Plattenspieler Auto-Start Rückführautomatik Autom. Größenwahl (für 30 cm und 17 cm-Schallplatten)
Antrieb:	Riemenantrieb
Motor:	Gleichstrommotor
Antriebsregel-Methode:	DC-Servo-Steuerung
Plattenteller:	Aluminium-Druckguß Durchmesser 30 cm
Plattenteller-Drehzahlen:	33-1/3 und 45 U/min
Gleichlaufschwankungen:	0,045% WRMS (JIS C5521) ±0,06% Spitze (IEC 98A bewertet)
Rumpeln:	−45 dB (IEC 98A unbewertet) −70 dB (IEC 98A bewertet)

■ Tonarm

Typ:	Statisch balancierter Type, gerader Tonarm, 4-Punkt-Kardanaufhängung
Effektive Länge:	20 cm
Spurfehlwinkel:	+0°36' (bei der Einlaufrille einer 30 cm-Platte) +3°18' (bei der Auslaufrille einer 30 cm-Platte)

■ Tonabnehmer

Typ:	Beweglicher Magnet-Stereoton-abnehmer vom Einstecktyp
Magnetkreis:	Ganzlamellenkern
Frequenzgang:	10 Hz bis 40 kHz
Ausgangsspannung:	2,5 mV bei 1 kHz 5 cm/s. Null-zu-Spitze, lateral [7 mV bei 1 kHz 10 cm/s. Null-zu-Spitze, 45° (DIN 45 500)]
Kanaltrennung:	22 dB bei 1 kHz
Kanalabweichung:	Innerhalb 2 dB bei 1 kHz
Empfohlene Endimpedanz:	47 kΩ~100 kΩ
Nachgiebigkeit (dynamisch):	12 × 10^{-6}cm/dyn bei 100 Hz
Auflagekraft-Einstellbereich:	1,25 ±0,25 g (12,5 ±2,5 mN)
Gewicht:	6 g (nur Tonabnehmer)
Ersatznadel:	EPS-30CS

Änderungen der technischen Daten vorbehalten.
Die angegebenen Gewichts- und Abmessungsdaten sind ungefähre Werte.

Français

CARACTERISTIQUES

■ Généralités

Alimentation: ~110-120/220-240V, 50 ou 60 Hz
Consommation: 6 W
Dimensions: 31,5 × 9,2 × 35 cm
(L×H×P) (65,5 cm de profondeur lorsque le tiroir est à l'extérieur)
Poids: 5.5 kg

■ Platine de lecture

Type: Type à chargement frontal
Platine entièrement automatique
Démarrage automatique
Retour automatique
Sélecteur automatique du diamètre des disque (pour 30 cm [12 pouces] et 17 cm [7 pouces])
Système d'entrainement: Entrainement par courroie
Moteur: Moteur C.C.
Groupe de réglage: Servocommande à C.C.
Plateau de lecture: En aluminium moulé sous pression
Diamètre 30 cm
Vitesses de rotation: 33-1/3 et 45 t/p.m.
Pleurage et scintillement: 0,045% de valeur efficace (JIS C5521)
±0,06% de crête
(IEC 98A Pondéré)
Ronflement: −45 dB (IEC 98A Non pondéré)
−70 dB (IEC 98A Pondéré)

■ Bras de lecture

Type: Bras de lecture droit, de type statiquement équilibré.
Suspension à la cardan sur 4 pivots.
Longueur effective: 200 mm
Angle d'erreur de piste: +0°36' (au sillon extérieur d'un disque de 30 cm)
+3°18' (au sillon intérieur d'un disque de 30 cm)

■ Cellule pick-up

Type: Connecteur de type enfichable actionnant la cellule de lecture stéréo à aimant mobile.
Circuit magnétique: Noyau entièrement feuilleté
Réponse en fréquence: 10 Hz à 40 kHz
Tension de sortie: 2,5 mV à 1 kHz; 5 cm/s., zéro à vitesse latérale de crête
(7 mV à 1 kHz 10 cm/s., zéro à vitesse 45° de crête [DIN 45 500])
Séparation des canaux: 22 dB à 1 kHz
Equilibrage des canaux: En deçà de 2 dB à 1 kHz
Impédance de charge recommandée: 47 kΩ~100 kΩ
Elasticité (dynamique): 12 × 10⁻⁶cm/dyne à 100 Hz
Plage de la force verticale d'appui: 1,25 ±0,25 g (12,5 ±2,5 mN)
Poids: 6 g (cellule seule)
Pointe de lecture de remplacement: EPS-30CS

Les spécifications sont susceptibles d'être modifiées sans avertissement préalable.
Le poids et les dimensions donnés sont approximatifs.

Español

ESPECIFICACIONES

■ En general

Alimentación de corriente: ~110-120/220-240V, 50 ó 60 Hz
Consumo de corriente: 6 W
Dimensiones: 31;5 × 9,2 × 35 cm
(Ancho×Alto×Prof.) (65,5 cm de profundidad cuando el cajón está salido fuera)
Peso: 5.5 kg

■ Sección del plato giratorio

Tipo: Plato giratorio automático
Con carga frontal
Arranque automático
Retorno automático
Selección automática de tamaño
(para 30 cm (12") y 17 cm (7"))
Método de accionamiento: Accionamiento por correa
Motor: Motor de corriente continua
Método de control de accionamiento: Servocontrol por corriente continua
Platillo del plato giratorio: Aluminio fundido
Diámetro 30 cm
Velocidades del plato giratorio: 33-1/3 y 45 rpm
Ululaciones y trémolo: 0,045% WRMS (JIS C5521)
±0,06% cresta
(IEC 98A Ponderado)
Ruido de rodadura: −45 dB (IEC 98A No ponderado)
−70 dB (IEC 98A Ponderado)

■ Sección del brazo sonoro

Tipo: Blazo sonoro recto con equilibrio estático, suspensión cardánica con 4 pivotes
Longitud efectiva: 20 cm
Angulo de error de seguimiento: +0°36' (en el surco exterior de un disco de 30 cm)
+3°18' (en el surco interior de un disco de 30 cm)

■ Sección del cartucho

Tipo: Cartucho estereofónico de imán móvil con conector enchufable
Circuito magnético: Núcleo totalmente laminado
Respuesta de frecuencia: 10 Hz a 40 kHz
Voltaje de salida: 2,5 mV a 1 kHz
Con velocidad lateral de cero a cresta de 5 cm/s
[7 mV a 1 kHz Velocidad de 45° de cero a cresta de 10 cm/s (DIN 45 500)]
Separación de canales: 22 dB a 1 kHz
Equilibrio de canales: Sin exceder 2 dB a 1 kHz
Impedancia de carga recomendada: 47 kΩ~100 kΩ
Elasticidad (dinámica): 12 × 10⁻⁶cm/dina a 100 Hz
Radio de presión de la aguja: 1,25 ±0,25 g (12,5 ±2,5 mN)
Peso: 6 g (cartucho sólo)
Aguja de recambio: EPS-30CS

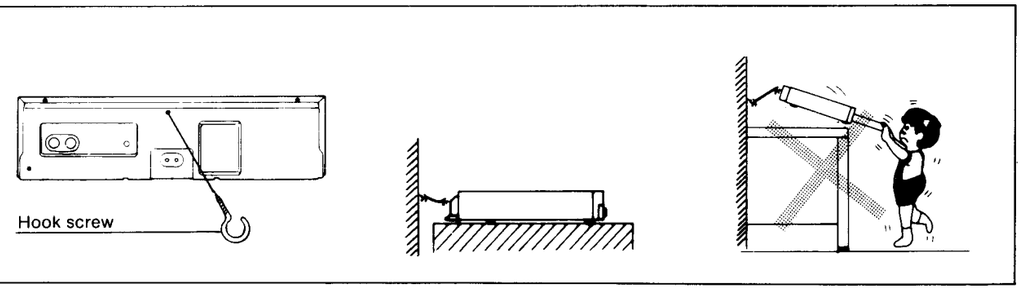
Las especificaciones quedan sujetas a cambios sin aviso previo.
El peso y las dimensiones indicados son aproximados.

■ USING SAFETY PART

When the unit is placed within reach of small children or in a location from which it could fall if bumped or shaken, use the accessory safety part to hold the unit in place.

[Installation]

Attach one hook screw to the wall and the other one to the rear panel of the unit as shown. Then hook the part over each screw so that a proper length of part is used between the two hooks.



■ CONTENTS

	Page
SAFETY PRECAUTIONS	5
LOCATION OF CONTROLS	6
DISASSEMBLY INSTRUCTIONS	7~11
BLOCK DIAGRAM	11
TROUBLE SHOOTING	12
MEASUREMENTS AND ADJUSTMENT (English)	13
MESSUNGEN UND JUSTIERUNGEN (Deutsch)	14
MESURAGES ET RÉGLAGES (Français)	15
MEDICIONES Y AJUSTE (Español)	16
CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM	17, 18
SCHEMATIC DIAGRAM	19, 20
REPLACEMENT PARTS LIST	21, 22, 26
EXPLODED VIEWS	
Main Unit Parts	23, 24
Cabinet and Chassis Parts	25, 26
Tonearm Parts	26
Automatic Mechanism Parts	27
PACKING	28

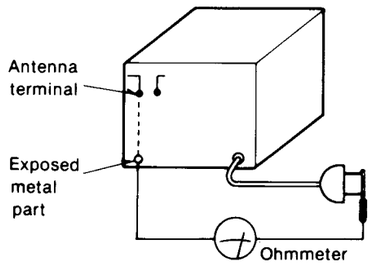
■ SAFETY PRECAUTIONS

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, shields, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

• INSULATION RESISTANCE TEST

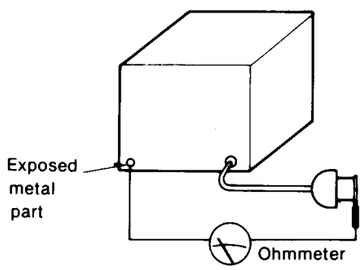
1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.



(Fig. A)

Resistance = 3MΩ—5.2MΩ

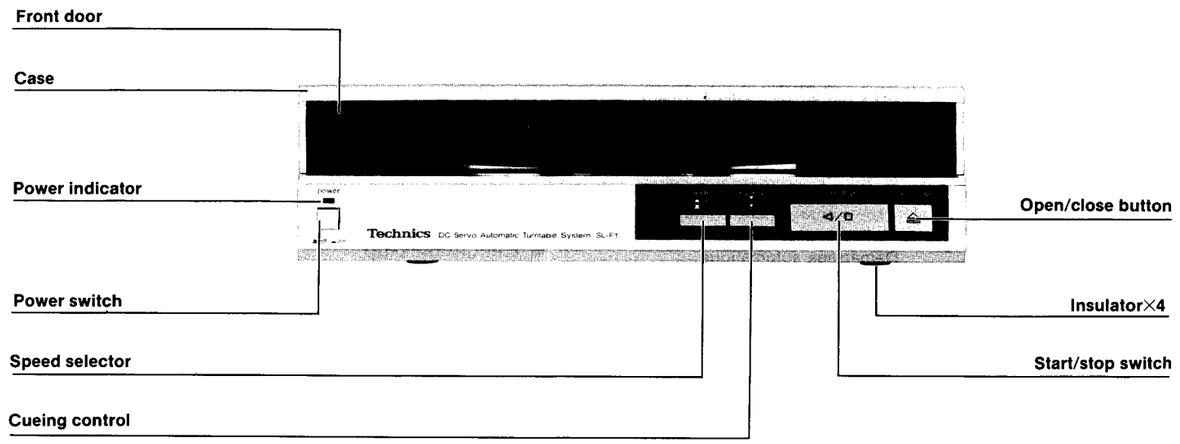


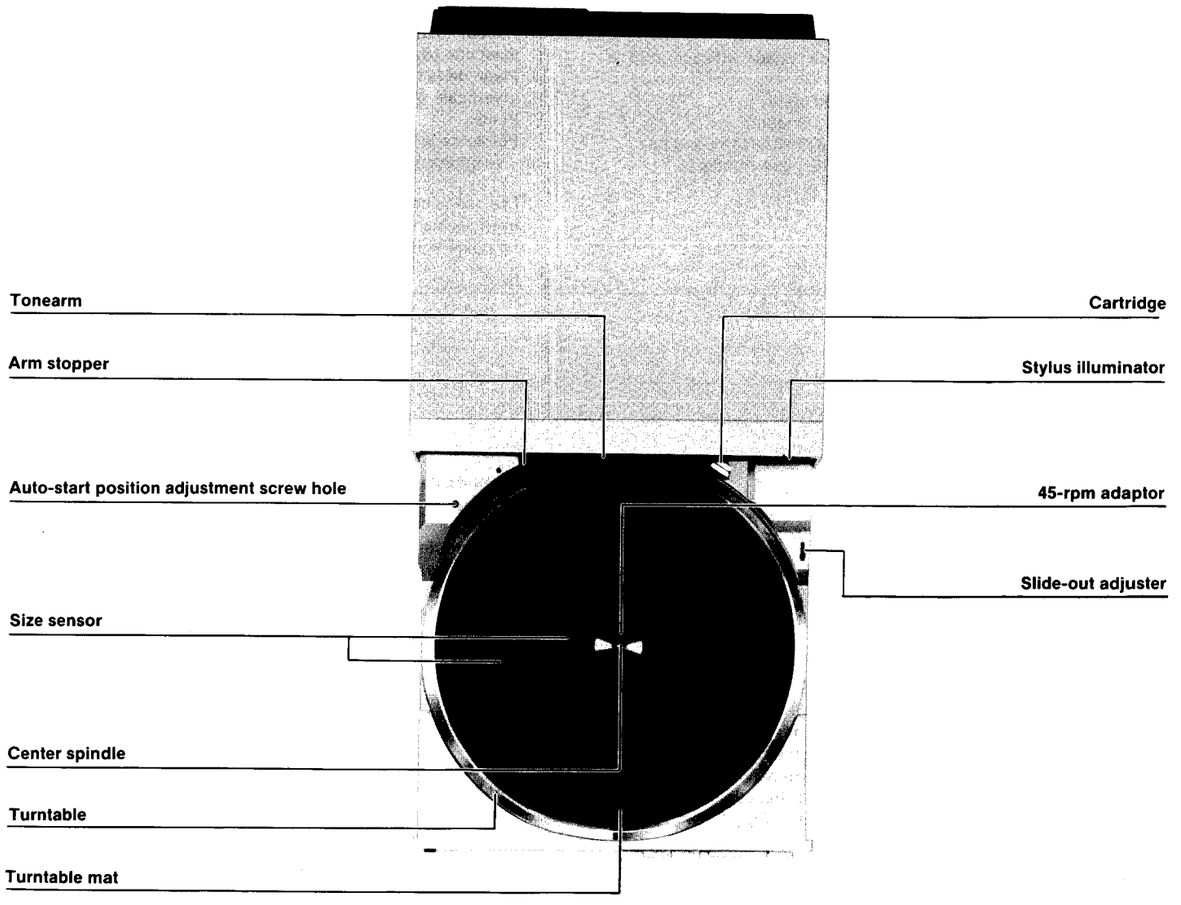
(Fig. B)

Resistance = Approx ∞

4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

■ LOCATION OF CONTROLS





■ DISASSEMBLY INSTRUCTIONS

- **How to remove the cartridge**
  1. Set the cueing control to "▼".
  2. Set the slide-out adjuster to "full".
  3. Shift the tonearm in the direction of the tonearm.
  4. Remove the cartridge setscrew. **(Fig. 1)**
  5. Pull out the cartridge with care not to touch the stylus tip. **(Fig. 2)**
     To set the cartridge, completely insert it matching the tonearm connector with the cartridge pin, then tighten the cartridge setscrew.

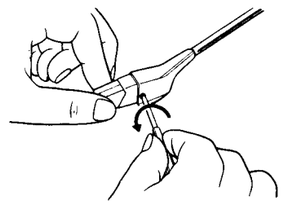


Fig. 1

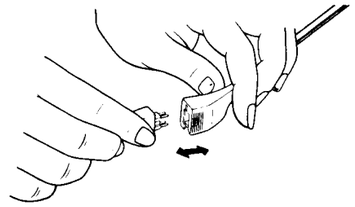


Fig. 2

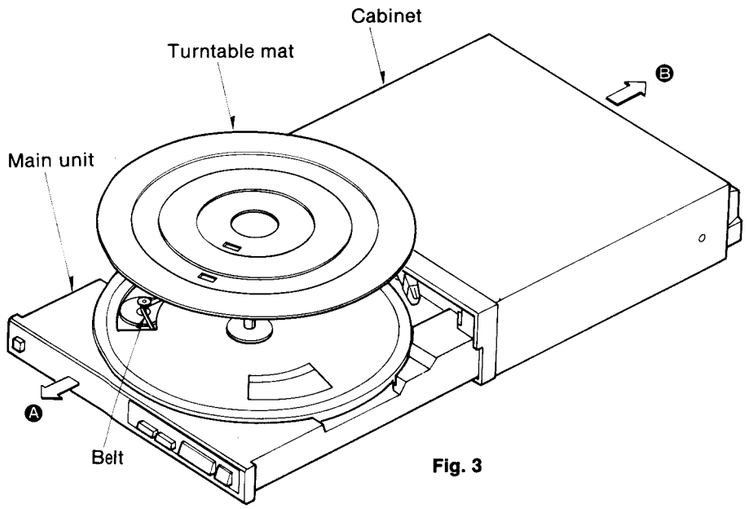


Fig. 3

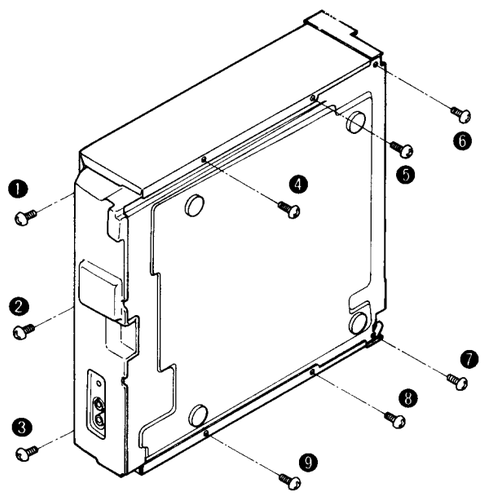


Fig. 4

- **How to remove the cabinet**
  1. Pull out the main unit in the direction of the arrow **(Fig. 3: Ⓐ)** holding it on both ends.
  2. Take off the turntable mat and remove the turntable belt. Lift up the turntable platter to remove it. **(Fig. 3)**
  3. Raise the set sideways and remove the 9 setscrews **(Fig. 4: ❶ ~ ❾)** of the cabinet.
  4. Shift the set back as it was, and remove the cabinet by slowly pulling it in the direction of the arrow **(Fig. 3: Ⓑ).**

- **How to remove the 45-rpm adaptor**
  1. Remove the turntable platter.
  2. Unfasten the 3 claws from the back of the turntable platter. Then the 45-rpm adaptor can be removed. **(Fig. 5)**

- **How to remove the record size sensor board**
  1. Remove the turntable platter.
  2. Unfasten the 4 claws from the back of the turntable platter. Then the record size sensor board can be removed. **(Fig. 5)**

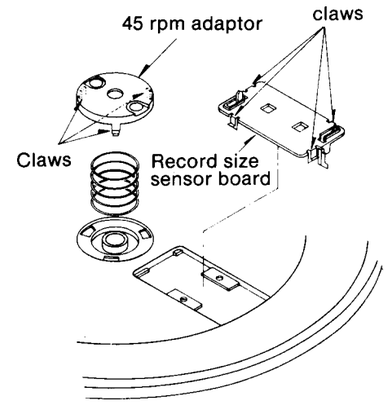
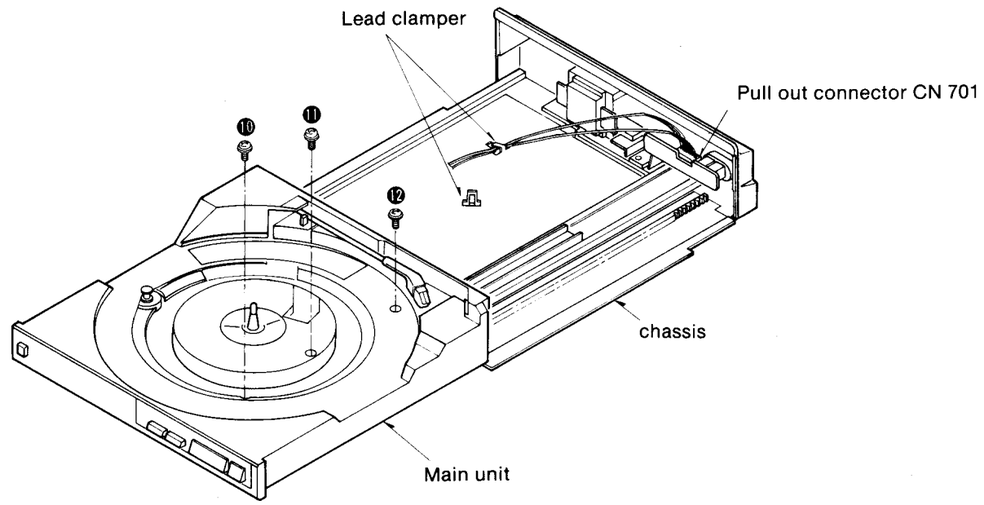


Fig. 5



(Fig. 6)

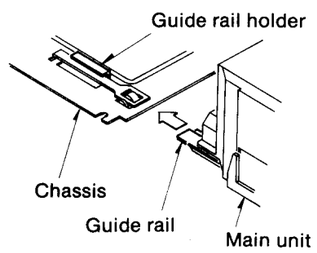


Fig. 7

- **How to remove main unit**
  1. Remove the cabinet. **(Refer to "How to remove the cabinet".)**
  2. Remove the connector CN701 and disconnect the lead wire from the clamper.
  3. Remove the 3 setscrews **(Fig. 6: ⑩ ~ ⑫)** of main unit, then the main unit can be removed from the chassis.

Note:
When setting the main unit on the chassis, match the guide rail holder (chassis side) with the guide rail (main unit side) beforehand. **(Fig. 7)**

- **How to remove the operation circuit board**
  1. Pull out the main unit and remove the turntable platter.
  2. Turn the set over or raise it sideways, and remove the 9 setscrews **(Fig. 8: ⑬ ~ ㉑)** of bottom plate of main unit.
  3. Remove the 3 setscrews **(Fig. 9: ㉒ ~ ㉔)** of operation circuit board.
  4. Remove the operation circuit board power switch side in the direction of arrow Ⓐ **(Fig. 8)**, then lift up the board in the direction of arrow Ⓑ.

- **How to remove each operation knob**
  1. Remove the operation circuit board.
  2. The power switch knob, speed selector and cueing knobs can be pulled out. **(Fig. 10)**
  3. Remove the bracket as in **Fig. 11.**
  4. Push and remove the start/stop button as in **Fig. 12**. Subsequently, remove the open/close button.
  5. When installing the operation circuit board, make sure that the hole in the cueing lever is aligned to the boss.

Notes:
1. The start/stop button and open/close button claws are liable to break. So, carry out the disassembly and assembly with sufficient care.
2. When fitting the start/stop button and open/close button, be sure to set the spring first.
3. When fitting the start/stop button and open/close button, it is practical to remove the ornament plate by screwdriver as in **Fig. 11**.

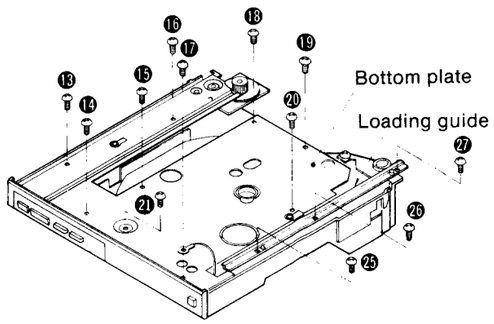


Fig. 8

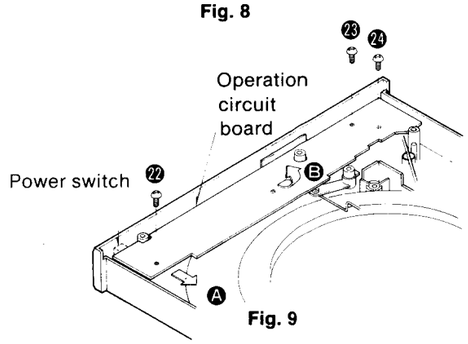


Fig. 9

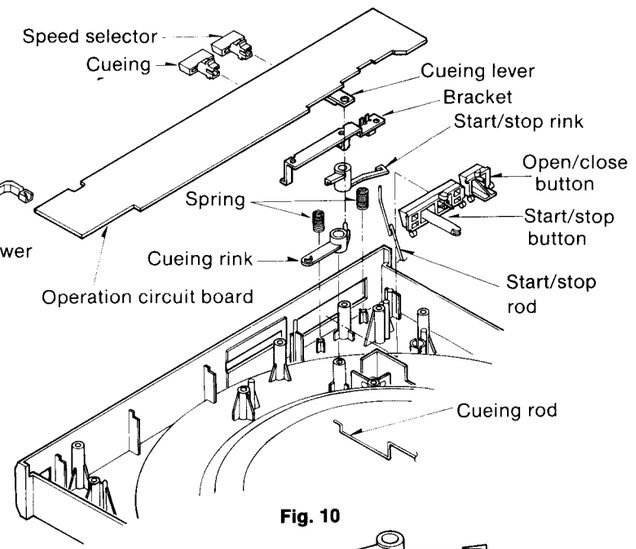


Fig. 10

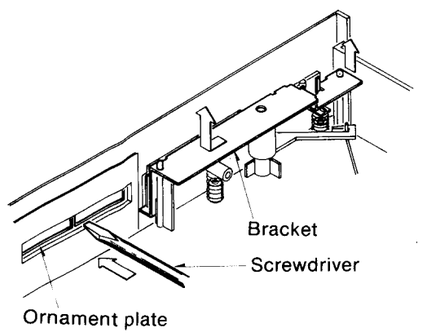


Fig. 11

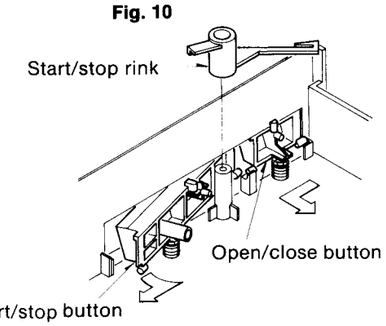


Fig. 12

- **How to remove the mechanism plate**
  1. Remove the main unit from the chassis. **(Refer to "How to remove the main unit".)**
  2. Remove the bottom plate of main unit and loading guide setscrews **(Fig. 8: ㉕ ~ ㉗).**
  3. Remove the operation circuit board. **(Refer to "How to remove the operation circuit board")**
  4. Remove the cueing rod and start/stop rod from the mechanism plate. **(Fig. 13)**
  5. Remove the 3 setscrews **(Fig. 13: ㉘ ~ ㉚)** from the mechanism plate.
  6. With mechanism plate setscrews **(Fig. 13: ㉛ ~ ㉝)** and output circuit board setscrew **(Fig. 13: ㉞)** removed, the mechanism plate can be removed.

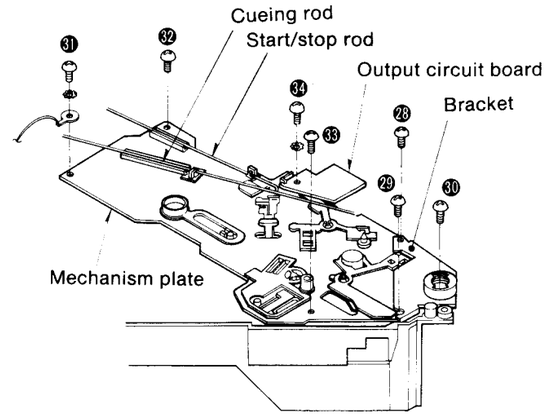


Fig. 13

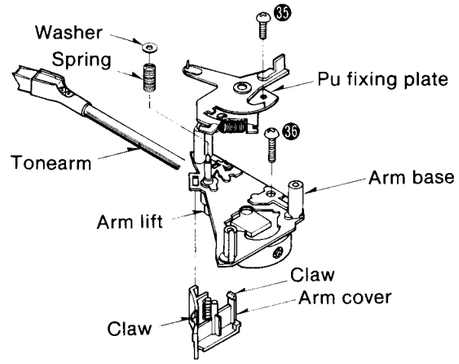


Fig. 14

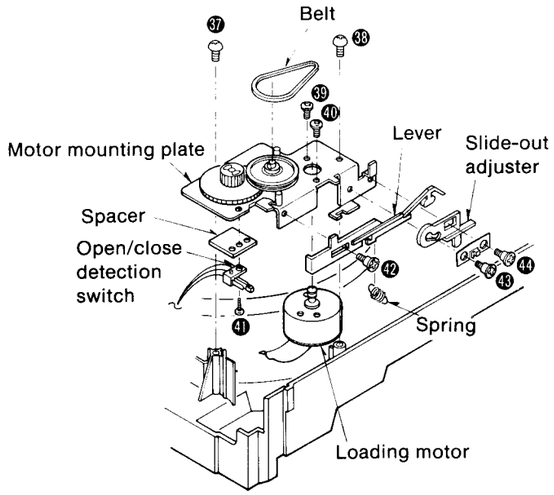


Fig. 15

- **How to remove the tonearm**
  1. Remove the cartridge.
  2. Remove the mechanism plate. **(Refer to "How to remove the mechanism plate".)**
  3. Remove the tonearm unit from main unit.
  4. Unfasten the 2 claws and remove the arm cover. **(Fig. 14)**
  5. Remove the PU fixing plate setscrew **(Fig. 14: ㉟)** to remove the fixing plate.
  6. Remove the tonearm setscrew **(Fig. 14: ㊱)** to remove the tonearm from the arm base.

- **How to remove the arm lift**
  1. Remove the tonearm. **(Refer to "How to remove the tonearm".)**
  2. Pull out the washer and spring to remove the arm lift. **(Fig. 14)**

- **How to remove the loading motor and open/close detection switch**
  1. Remove the main unit from the chassis. **(Refer to "How to remove the main unit".)**
  2. Remove the bottom plate of main unit.
  3. Remove the motor mounting plate setscrews **(Fig. 15: ㊲ , ㊳)** and lift up the plate.
  4. Remove the motor belt.
  5. Remove the motor setscrews **(Fig. 15: ㊴, ㊵)**, then the loading motor can be removed.
  6. Remove the open/close detection switch setscrew **(Fig. 15: ㊶)**, then the switch can be removed.

Note:
When fitting a open/close detection switch, be sure to use a spacer as shown. **(Fig. 15)**

- **How to remove the slide-out adjuster**
  1. Remove the motor mounting plate.
  2. Remove the slide-out adjuster and lever setscrews **(Fig. 15: ㊷ ~ ㊹)** and the spring.

- **How to remove the front door**
  1. Remove the cabinet. **(Refer to "How to remove the cabinet".)**
  2. Move up the center of front door as in **Fig. 16** to detach the right and left bosses of front door from the cabinet one by one.
  3. Remove the open/close rod from the front door.

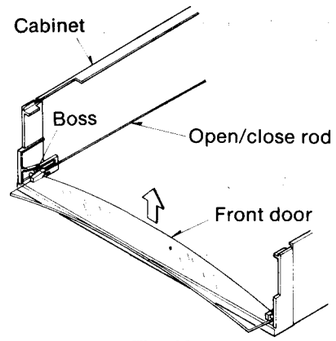
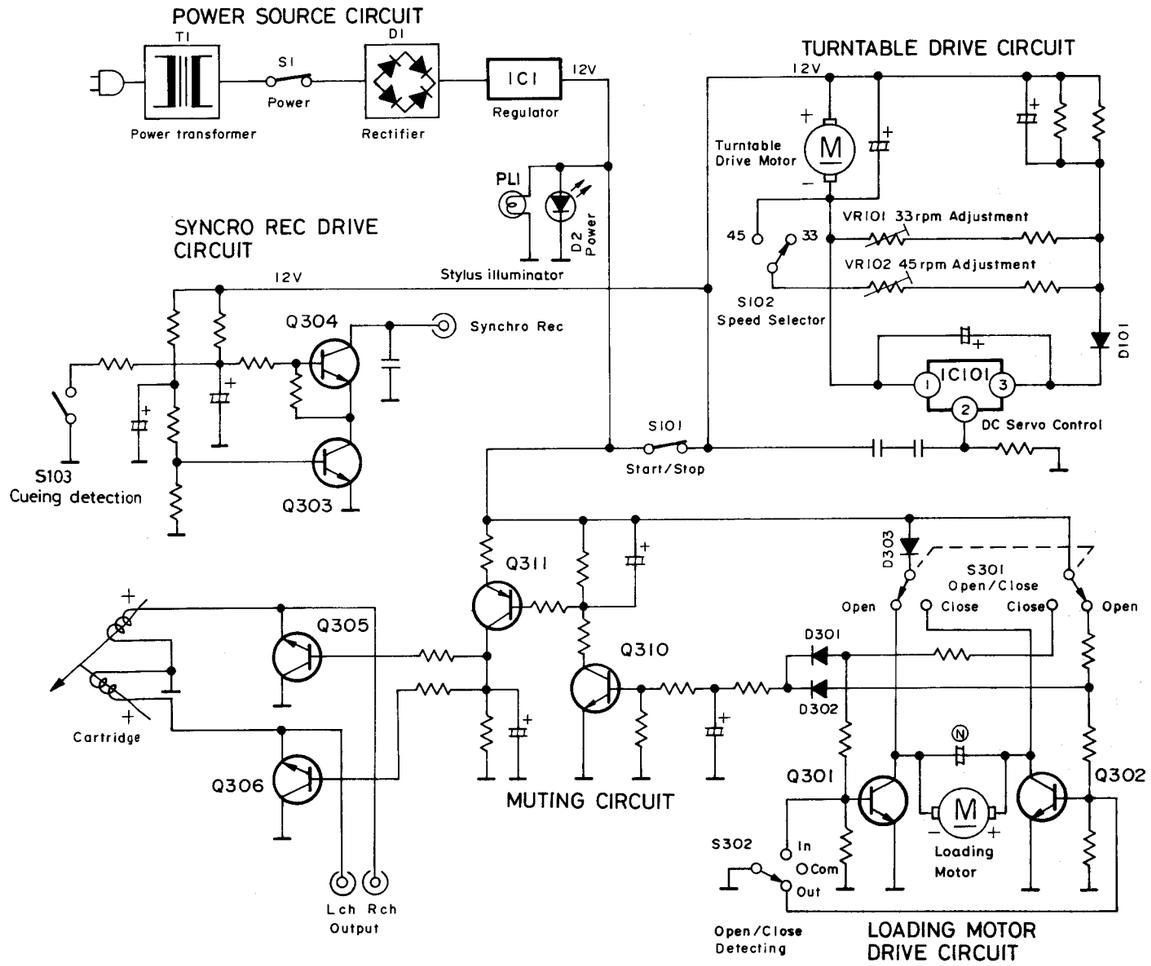


Fig. 16

■ BLOCK DIAGRAM



■ TROUBLE SHOOTING

- **How to remove the P.C.B.**
1. Remove the turntable mat and turntable platter, then pull out the main unit.
2. Raise the set sideways and remove the bottom plate of main unit.
3. Remove the loading motor belt.
4. Check each part as shown in **Fig. 17.**

Notes:
(1) Take care so that the set does not fall down.
(2) Be sure to remove the belt before checking the loading drive circuit.
(3) Check the turntable drive circuit without load. (removing the turntable platter).
(4) The loading motor mounting plate is not the chassis earth. (Plus voltage is applied to it.) Take care not to ground to the loading motor mounting plate removed.

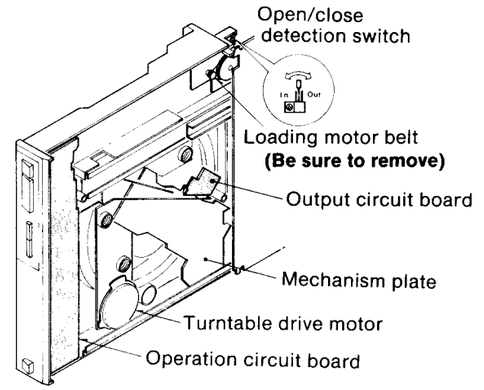


Fig. 17

No sound is produced

1. Tonearm connector and PU lead wire disconnected? → Pick-up lead wire disconnected
2. Tonearm connector and cartridge pin completely inserted? → Insert completely
3. Stylus is completely inserted into cartridge? → Insert completely
4. Check the muting circuit.
   ① Voltage of Q310, 311

Motor \ Q	Q310 Ⓑ	Q310 Ⓒ	Q311 Ⓑ	Q311 Ⓒ
Stop	0.2	12	12	0
Rotating	0.6	0	9.5	7.3

   ② Voltage of Q305, Q306 (Ⓑ: base terminal) → D301, D302 Q310, Q311

Motor	Q305	Q306
Stop	0	0
Rotating	0.7	0.7

→ Q305, Q306 R313, R314

* When loading motor is rotating, the muting circuit operates and no sound is produced.

Loading motor does not rotate

* **Main unit cannot be shifted forward.**
1. Check voltage of Q301 and Q302.

S302 \ Q	Q301 Ⓑ	Q301 Ⓒ	Q302 Ⓑ	Q302 Ⓒ
Out	0	12	0	12
In	0	11.5	1.4	0.7
Com	0	11.5	1.4	0.7

* **Main unit cannot be shifted back**
1. Check voltage of Q301 and Q302.

S302 \ Q	Q301 Ⓑ	Q301 Ⓒ	Q302 Ⓑ	Q302 Ⓒ
Out	1.4	0.7	0	11.5
In	0	12	0	12
Com	1.4	0.7	0	11.5

→ D303, S301 Q301, 302 R301 ~ 306 S302, Motor

Noise is made
Sound is distorted

1. Dust sticking in record groove? → Wipe off dust
2. Stylus worn out. → Replace the stylus
3. Dust sticking to stylus tip? → Remove dust by brush
4. Cartridge and stylus completely inserted? → Insert completely
5 Check the muting circuit.
* Check if the belt is not slipped off the turntable platter or capstan.

Turntable platter does not rotate.

1. Check for disconnection of power cord plug. → Insert completely
2. Voltage across CN601 pins ③ - ④ — AC 17 ~ 21 V? → Power transformer defective
3. Voltage of IC1 pin ③ —DC 11 ~ 13 V? → IC1, D1, S1
4. Voltage across IC101 pins ③ and ① — DC 1.0 ~ 1.4 V?
5. Voltage across CN101 pins ② and ③.
   33 rpm ... 3.0 ~ 4.0 V DC?
   45 rpm ... 3.5 ~ 4.5 V DC? → S101, IC101 D101, Motor

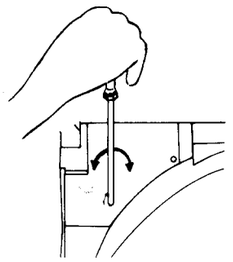
■ MEASUREMENTS AND ADJUSTMENT — English

- **Instruments used**

1. Screwdriver (Thin long flat-head screwdriver)
2. 30 cm record

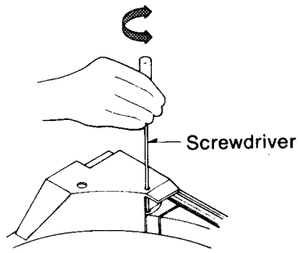
1. Auto-start position

1. Press the open/close button.
2. Set the slide-out adjuster to "full".
3. Stop the tonearm with arm stopper.
4. Adjust it as shown at right. If stylus is lowered outside the lead-in groove, then turn it clockwise (IN). If stylus is lowered inside the lead-in groove, then turn it counterclockwise (OUT). (Do not press the screwdriver excessively.)



2. Arm lift height

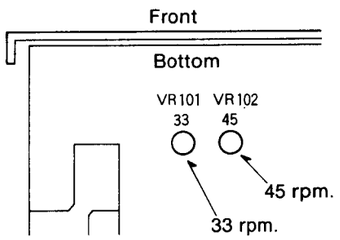
1. Press the open/close button.
2. Set the slide-out adjuster to "full".
3. Stop the tonearm with arm stopper.
4. Set the arm up/down switch to "▼".
5. Put a record on the turntable mat.
6. Push in the arm stopper to set the tonearm free, and adjust the gap between stylus tip and record surface to 4 mm — 7 mm by use of a screwdriver.



3. Rotating speed

1. Press the open/close button.
2. Set the speed selector to "33".
3. Insert a screwdriver into the adjusting hole for 33 rpm , getting access from the bottom of main unit, and then turn VR101.
4. Set the speed selector to "45".
5. Insert a screwdriver into the adjusting hole for 45 rpm and turn VR102.

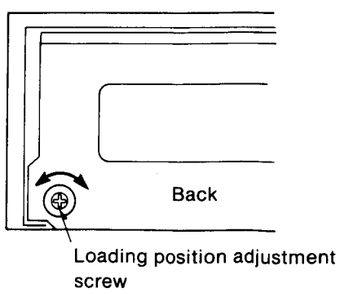
Note: Be sure to make the adjustment for 33 rpm. first.



4. Adjustment of loading position

If the main unit is not completely fitted in the cabinet with the open/close button depressed or if the loading motor is rotating even with main unit completely fitted in place, make the adjustment by turning the loading position adjusting screw on the back. If main unit is not completely fitted in place, turn it counterclockwise. If loading motor is rotating even with main unit fitted in place, turn it clockwise.

* If loading motor is rotating, muting circuit operates and no sound is produced.



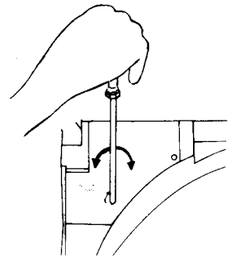
■ MESSUNGEN UND JUSTIERUNGEN — Deutsch

- **Zu verwendende Instrumente**

1. Schraubendreher (langer, dünner Schraubendreher mit flachem Kopf)
2. 30 cm-Schallplatte

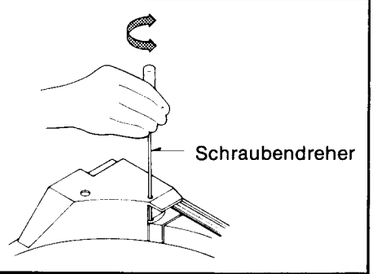
1. Auto-Start-Position

1. Die Taste "open/close" drücken.
2. Die Herausschiebe-Justierung auf "full" einstellen.
3. Den Tonarm mit der Tonarmarretierung befestigen.
4. So Justieren, wie rechts gezeigt. Falls die Nadel außerhalb der Einlaufrille aufsetzt, im Uhrzeigersinn (IN) drehen. Falls die Nadel im bespielten Teil der Platte aufsetzt, entegen dem Uhrzeigersinn (OUT) drehen. (Mit dem Schraubendreher nicht mit Kraft nach unten drücken.)



2. Tonarmlifthöhe

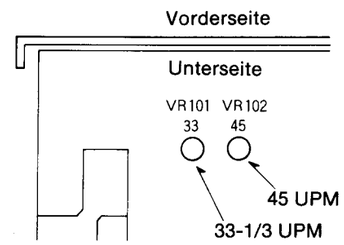
1. Die Taste "open/close" drücken.
2. Die Herausschiebe-Justierung auf "full" einstellen.
3. Den Tonarm mit der Tonarm-Arretierung befestigen.
4. Den Tonarmlift-Schalter auf "▼" stellen.
5. Eine Schallplatte auf den Plattenteller auflegen.
6. Die Tonarm-Arretierung nach innen drücken, um den Tonarm freizustellen und den Abstand zwischen Nadelspitze und Plattenoberfläche mit einem Schraubendrehen auf **4 mm ~ 7 mm** einstellen.



3. Drehzahl

1. Die Taste "open/close" drücken.
2. Den Drehzahl-Wahlschalter auf "33" einstellen.
3. Einen Schraubendreher in das Justierloch für 33-1/3 UPM einstecken (von der Unterseite des Gerätes her) und VR101 drehen.
4. Den Drehzahl-Wahlschalter auf "45" einstellen.
5. Den Schraubendreher in das Justierloch für 45 UPM einstecken und VR102 drehen.

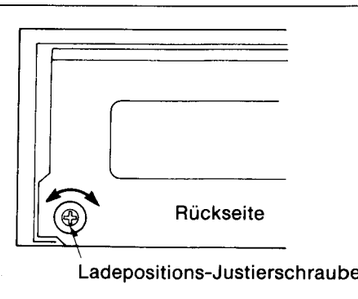
Anmerkung:
Die Drehzahl-Justierung für 33-1/3 UPM muß zuerst durchgeführt werden.



4. Justierung der Ladeposition

Falls der Gerätehauptteil bei Drücken der Taste "open/close" nicht vollständig in das Gehäuse eingefahren wird, oder wenn der Lademotor bei vollständig eingefahrenen Gerätehauptteil noch rotiert, so ist mit der Ladepositions-Jusiterschraube an der Rückseite wie folgt zu justieren. Wenn der Gerätehauptteil nicht vollständig eingefahren wird: entgegen dem Uhrzeigersinn drehen. Wenn der Lademotor noch weiter rotiert, wenn der Gehäusehauptteil vollständig eingefahren ist: im Uhrzeigersinn drehen.

* Wenn der Lademotor rotiert, ist die Stummschaltung in Betrieb und verhindert die Tonwiedergabe.



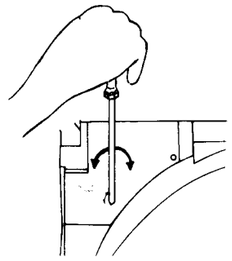
■ MESURAGES ET RÉGLAGES — Français

- **Equipement utilisé**

1. Tournevis (utiliser un tournevis à tête plate, mince et long)
2. Disque de 30 cm

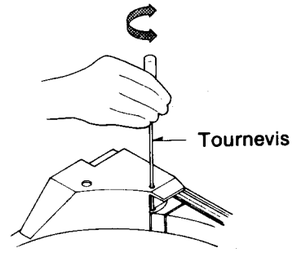
1. Position de démarrage automatique

1. Appuyer sur la touche d'ouverture/fermeture.
2. Régler l'ajusteur de glissement vers l'extérieur sur "full" (à fond).
3. Bloquer le bras de lecture avec le bloqueur du bras.
4. L'ajuster comme il est montré à droite. Si la pointe de lecture s'abaisse à l'extérieur du sillon d'entrée, la tourner alors dans le sens des aiguilles d'une montre ["IN" (entrée)]. Si la pointe de lecture s'abaisse à l'intérieur du sillon d'entrée, la tourner alors dans le sens inverse des aiguilles d'une montre ["OUT" (sortie)]. (Ne pas appuyer avec force sur le tournevis.)



2. Hauteur d'élévation du bras

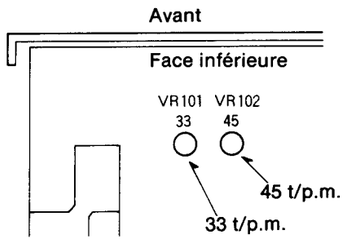
1. Appuyer sur la touche d'ouverture/fermeture.
2. Régler l'ajusteur de glissement sur "full" (à fond).
3. Bloquer le bras de lecture avec le bloqueur du bras.
4. Régler le commutateur d'élévation/abaissement sur "▼".
5. Placer un disque sur le tapis de la platine.
6. Appuyer sur le bloqueur du bras pour libérer le bras de lecture et régler l'intervalle entre l'extrémité de la pointe de lecture et la surface du disque sur 4 mm à 7 mm en utilisant un tournevis.



3. Vitesse rotationnelle

1. Appuyer sur la touche d'ouverture/fermeture.
2. Régler le sélecteur de vitesse sur "33".
3. Introduire un tournevis dans l'orifice de réglage pour 33 t/p.m., en y accédant à partir de la face inférieure du corps principal, puis tourner VR101.
4. Régler le sélecteur de vitesse sur "45".
5. Introduire un tournevis dans l'orifice de réglage pour 45 t/p.m., et tourner VR102.

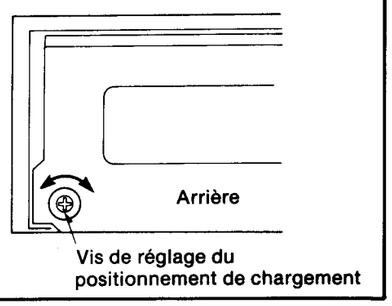
Nota:
S'assurer d'effectuer d'abord le rélage pour 33 t/p.m.



4. Ajustement de la position de chargement

Si le corps principal n'est pas complètement ajusté dans le boîtier avec la touche d'ouverture/fermeture enfoncée ou si le moteur pour chargement est en train de tourner même avec le corps principal entièrement ajusté en place, effectuer l'ajustement en tournant la vis de réglage du positionnement de chargement située à l'arrière. Si le corps principal n'est pas complètement ajusté en place, la tourner dans le sens inverse des aiguilles d'une montre. Si le moteur pour chargement est en train de tourner même avec le corps principal ajusté en place, la tourner dans le sens des aiguilles d'une montre.

* Si le moteur pour chargement est en train de tourner, le circuit d'accord silencieux fonctionnera et aucun son ne se fera entendre.



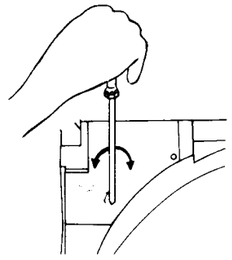
■ MEDICIONES Y AJUSTE — Español

- **Instrumentos usados**

1. Destornillador (obtener un destornillador largo, delgado, de cabeza plana)
2. Disco de 30 cm

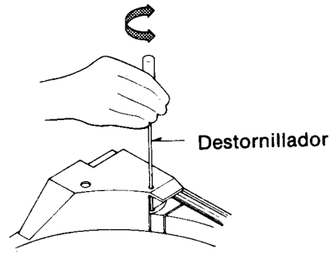
1. Posición de arranque automático

1. Pulsar el botón de abertura/cierre.
2. Poner el ajustador deslizable en "full" (pleno).
3. Fijar el brazo de fonocaptor con un fijador de brazo.
4. Ajustarlo como se muestra a la derecha. Si la aguja cae fuera del surco de entrada de disco, entonces girarlo a la derecha (ENTRADA). Si la aguja cae dentro del surco de entrada de disco, entonces girarlo a la izquierda (SALIDA). (No apretar el destornillador excesivamente.)



2. Altura de alza de brazo

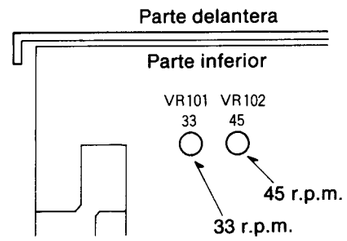
1. Pulsar el botón de abertura/cierre.
2. Poner el ajustador deslizable en "full".
3. Fijar el brazo de fonocaptor con un fijador de brazo.
4. Poner el interruptor de subida/bajada de brazo en "▼".
5. Colocar un disco sobre la esterilla de plato giradiscos.
6. Apretar adentro el fijador de brazo para que éste quede libre, y ajustar la separación entre la punta de aguja y la superficie de disco a **4 mm ~ 7 mm** con destornillador.



3. Velocidad rotativa

1. Pulsar elbotón de abertura/cierre.
2. Poner el selector de velocidad en "33".
3. Insertar un destornillador dentro del agujero de ajuste para 33 rpm., desde la parte inferior del cuerpo principal, y luego girar VR101.
4. Poner el selector de velocidad en "45".
5. Insertar un destornillador dentro del agujero de ajuste para 45 rpm. y girar VR102.

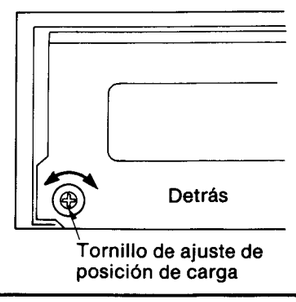
Nota:
Asegurarse de hacer el ajuste para 33 rpm. primero.



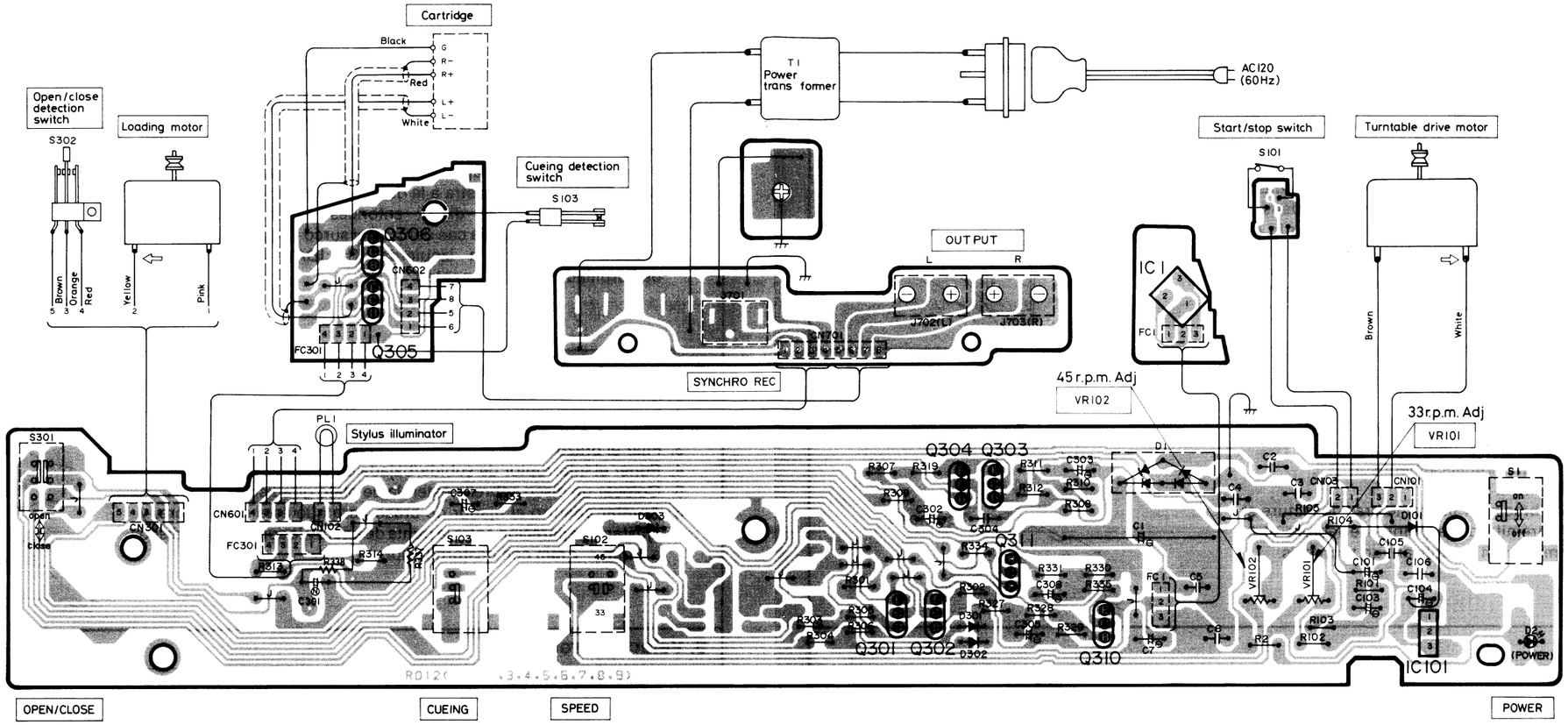
4. Ajuste de posición de carga

Si el cuerpo principal no está completamente instalado en el gabinete con el botón de abertura/cierra bajado o si el motor de carga está girando con el cuerpo principal completamente instalado en su lugar, hacer el ajuste girando el tornillo de ajuste de posición de carga de detrás. Si el cuerpo principal no está completamente instalado en su lugar, girarlo a la izquierda. Si el motor de carga está girando aun con el cuerpo principal instalado en su lugar, girarlo a la derecha.

* Si el motor de carga está girando, el circuito silenciador funciona y no se produce ningún sonido.

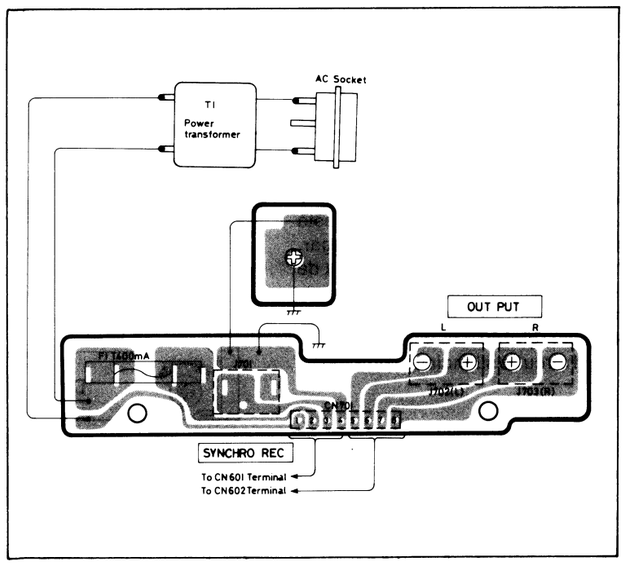


■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

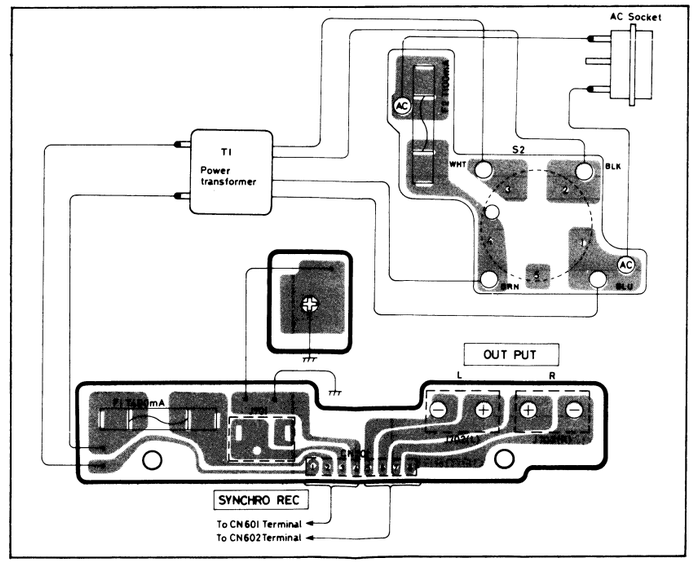


- **Power source circuit**

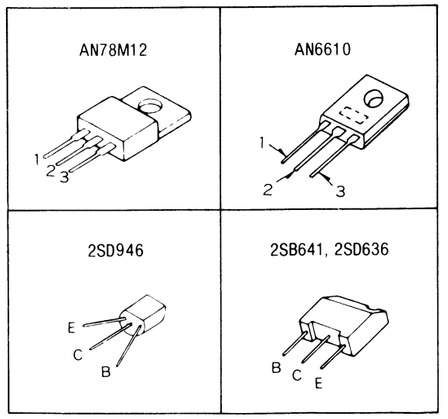
★ Product for Continental Europe, United Kingdom and Australia



★ Product for Southeast Asia, Oceania, Africa, Middle Near East and Central South America.



- **Terminal guide of IC and transistors**

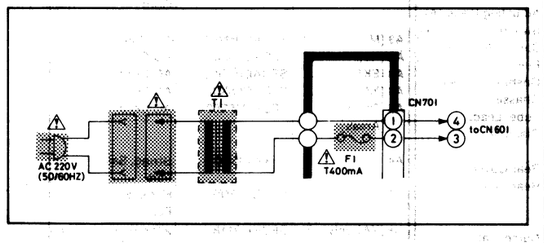


■ SCHEMATIC DIAGRAM (This schematic diagram may be modified at any time development of new technology.)

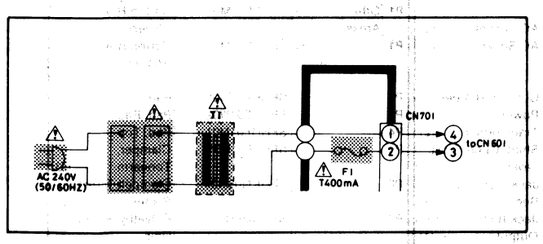
★ **Product for U.S.A.**

- **Power source circuit**

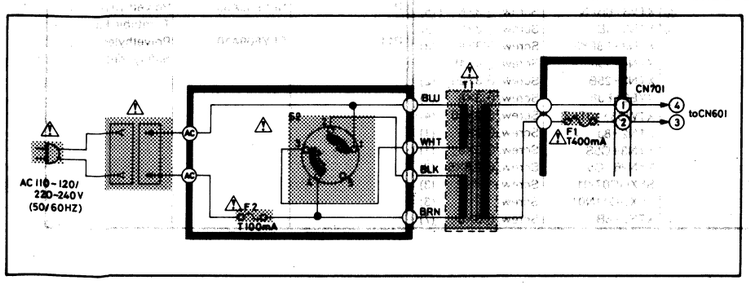
★ Product for Continental Europe

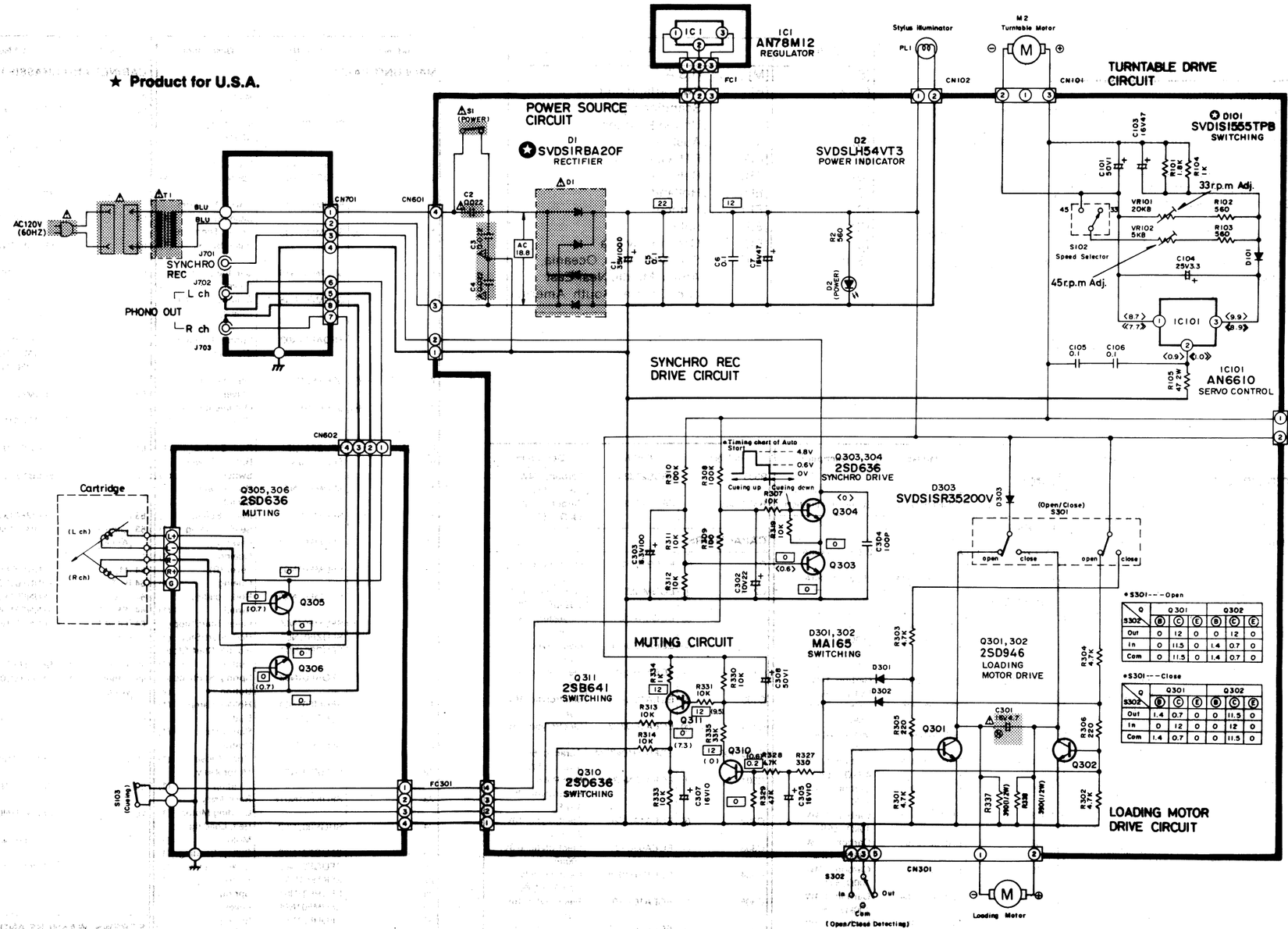


★ Product for United Kingdom and Australia



★ Product for Southeast Asia, Oceania, Africa, Middle Near East and Central South America.





Notes:

1. **S1** : Power switch in "on" position.
2. **S2** : Voltage selector "220 ~ 240 V" position.
3. **S101** : Start/stop switch in "start (on)" position.
4. **S102** : Speed selector in "33 rpm" position.
5. **S103** : Cueing detection switch in "on (cueing up)" position.
6. **S301** : Open/close switch in "open" position.
7. **S302** : Open/close detection switch in "out" position.
8. The values are the reference voltage values of this unit measured by DC electronic voltmeter (high impedance) on the bassis of chassis. Therefore, the voltage value may include some error due to the internal impedance of the tester or the measuring unit.
   * ▭ Loading motor and turntable motor stop mode
   * ( ) Loading motor rotating mode
   * < > Turntable motor rotating mode (33 rpm)
   * < > Turntable motor rotating mode (45 rpm)
9. — ⊕ B voltage lines.
10. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.
11. The part No. of diodes mentioned in the schematic diagram stand for production part No. Regarding the part No. with ✪ mark the production part No. are different from the replacement part No. Therefore, when placing an order for replacement parts, please use the part No. in the replacement parts list.

IMPORTANT SAFETY NOTICE

The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

SL-F1 SL-F1

■ REPLACEMENT PARTS LIST

Note:

1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice: Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.
4. The "Ⓢ" mark is service standard parts and may differ from production parts.
5. The parenthesized numbers in the columns of description stand for the quantity per set.
6. Ⓚ-marked parts are used for black only, while ○-marked parts are for silver type only.
7. Parts other than Ⓚ-and ○-marked are used for both black and silver types.

Color	Area
(S)	[M] .....U.S.A.
(S)(K)	[E] .....Switzerland and Scandinavia.
(S)	[EK].....United Kingdom
(S)	[XL].....Australia
(S)	[EG] ....F.R. Germany
(S)	[EB].....Belgium
(S)	[EH].....Holland
(S)	[EF].....France
(S)	[Ei] .....Italy
(S)	[EC].....Czechoslovakia
(S)(K)	[XA].....Southeast Asia, Oceania, Africa, Middle Near East and Central South America

Ref. No.	Part No.	Description
INTEGRATED CIRCUITS		
IC1	AN78M12	Regulator, 12V
IC101	AN6610	Turntable Drive
TRANSISTORS		
Q301, 302	2SD946	Loading Motor Drive
Q303~306	2SD636	Switching
Q310	2SD636	Switching
Q311	2SB641	Switching
DIODES		
D1 ⚠	SVDS1RBA20Z	Rectifier
D2	SVDSLH54VT3	Indicator, Power
D101 Ⓢ	MA162A	Switching
D301, 302	MA165	Switching
D303	SVD1SR35200	Switching
SWITCHES		
S1 ⚠	SFDSC02N02	Power
S2 [XA] only ⚠	SFDSHXW225-2	Voltage Selector
S101	SFDSD72R01	Start/Stop
S102	SFDSF01N03	Speed Selector
S103	SFDSF01N05	Cueing (Mechanical)
S103	SRDSBSW-180	Cueing detection (Electrical)
S301	SFDSF01N02	Open/Close
S302	SRDSBSW97-2	Open/Close Detector
VARIABLE RESISTORS		
VR101	EVN61AA00B24	33 rpm Adj., 20 kΩ (B)
VR102	EVN61AA00B53	45 rpm Adj., 5 kΩ (B)
POWER TRANSFORMER		
T1 [M] ⚠	SLT48DTL4B	Power Source
T1 [EK, XL] ⚠	SLT48DTE16E	Power Source
T1 [XA] ⚠	SLT48DT25E	Power Source
T1 [Other Areas] ⚠	SLT48DT15F	Power Source

Ref. No.	Part No.	Description
LAMP		
PL1	SFDNF01N01E	Stylus Illumination
FUSES		
F1 Except for [M] ⚠	XBAS2C04T1B	250 V, T400mA
F2 [XA] only ⚠	XBAS2C01T1B	250V, T100mA
RESISTORS		
R2	ERDS2TJ561	Carbon, 1/4W, 560Ω, ±5%
R101	ERDS2TJ182	Carbon, 1/4W, 1.8kΩ, ±5%
R102, 103	ERDS2TJ561	Carbon, 1/4W, 560Ω, ±5%
R104	ERDS2TJ102	Carbon, 1/4W, 1kΩ, ±5%
R105	ERG2ANJ470	Metal, 2W, 47Ω, ±5%
R301~304	ERDS2TJ472	Carbon, 1/4W, 4.7kΩ, ±5%
R305, 306	ERDS2TJ221	Carbon, 1/4W, 220Ω, ±5%
R307	ERDS2TJ103	Carbon, 1/4W, 10kΩ, ±5%
R308	ERDS2TJ104	Carbon, 1/4W, 100kΩ, ±5%
R309	ERDS2TJ101	Carbon, 1/4W, 100Ω, ±5%
R310	ERDS2TJ104	Carbon, 1/4W, 100kΩ, ±5%
R311~314	ERDS2TJ103	Carbon, 1/4W, 10KΩ, ±5%
R319	ERDS2TJ103	Carbon, 1/4W, 10kΩ, ±5%
R327	ERDS2TJ331	Carbon, 1/4W, 330Ω, ±5%
R328	ERDS2TJ472	Carbon, 1/4W, 4.7kΩ, ±5%
R329	ERDS2TJ473	Carbon, 1/4W, 47kΩ, ±5%
R330, 331	ERDS2TJ103	Carbon, 1/4W, 10kΩ, ±5%
R333	ERDS2TJ103	Carbon, 1/4W, 10kΩ, ±5%
R334	ERDS2TJ102	Carbon, 1/4W, 1kΩ, ±5%

Ref. No.	Part No.	Description
R335	ERDS2TJ333	Carbon, 1/4W, 33kΩ, ±5%
R337, 338	ERDS1TJ391	Carbon, 1/2W, 390Ω, ±5%
CAPACITORS		
C1 Ⓢ	ECEB1VU102	Electrolytic, 35V, 1000μF
C2~4 ⚠	ECQM1223KZ	Polyester, 100V, 0.022μF, ±10%
C5, 6 Ⓢ	ECQM1H104JZ	Polyester, 50V, 0.1μF
C7 Ⓢ	ECEA1CU470	Electrolytic, 16V, 47μF
C101 Ⓢ	ECEA1HU010	Electrolytic, 50V, 1μF
C103 Ⓢ	ECEA1CU470	Electrolytic, 16V, 47μF
C104 Ⓢ	ECEA1EU3R3	Electrolytic, 25V, 3.3μF
C105, 106	ECFR1H104ZFM	Ceramic, 50V, 0.1μF, ±20%
C301 ⚠	ECEA1EN4R7S	Non Polar Electrolytic, 25V, 4.7μF
C302 Ⓢ	ECEA1AU220	Electrolytic, 10V, 22μF
C303 Ⓢ	ECEA0JU101	Electrolytic, 6.3V, 100μF
C304 Ⓢ	ECCD1H101K	Ceramic, 50V, 100pF, ±10%
C305 Ⓢ	ECEA1CU100	Electrolytic, 16V, 10μF
C307 Ⓢ	ECEA1CU100	Electrolytic, 16V, 10μF
C308 Ⓢ	ECEA1HU010	Electrolytic, 50V, 1μF

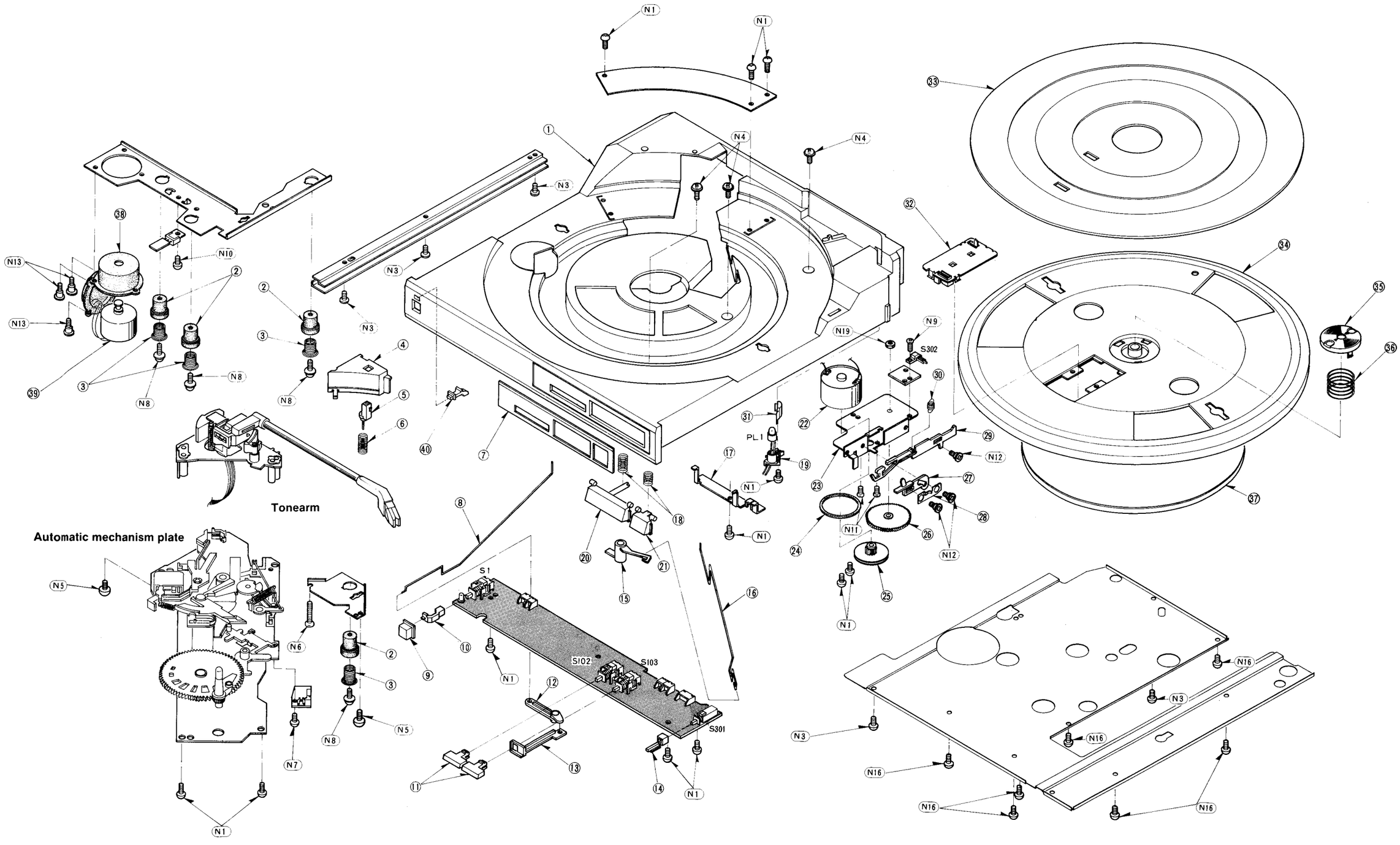
Ref. No.	Part No.	Description
MAIN UNIT PARTS		
1 ○	SFACF01S01	Main Unit (Silver) (1)
1 Ⓚ	SFACF01S21	Main Unit (Black) (1)
2	SFGAF01N02	Insulator (4)
3	SFQCF01N02	Spring, Insulator (4)
4 ○	SFUMF01N12	Cover, Tonearm Base (Silver) (1)
4 Ⓚ	SFUMF01N43	Cover, Tonearm Base (Black) (1)
5 ○	SFUMF01N18	Clamper, Tonearm (Silver) (1)
5 Ⓚ	SFUMF01N46	Clamper, Tonearm (Black) (1)
6	SFQAF01N02	Spring, Tonearm Clamper (1)
7 ○	SFKKF01S01	Ornament Plate (Silver) (1)
7 Ⓚ	SFKKF01S02	Ornament Plate (Black) (1)
8	SFUZF01N01	Rod, Cueing (1)
9	SFKTQ15N03	Button, Power Switch (1)
10	SFUMF01N11	Rod, Power Switch (1)
11	SFKTF01N03	Knob, Speed Select/Cueing (2)
12	SFUMF01N04	Lever (A), Cueing (1)
13	SFUMF01N05	Lever (B), Cueing (1)
14	SFUMF01N20	Rod, Loading Switch (1)
15	SFUMF01N09	Lever, Start/Stop (1)
16	SFUZF01N02	Rod, Start/Stop (1)
17	SFUPF01N07	Holder, Start/Stop Button (1)
18	SFQAF01N03	Spring, Start/Stop Button (2)
19	SFUMF01N21	Holder, Lamp (1)
20	SFKTF01N01	Button, Start/Stop (1)
21	SFKTF01N02	Button, Open/Close (1)
22	SFMZF01N02R	Motor Ass'y, Loading (1)
23	SFUKF01N01E	Base Ass'y, Loading Motor (1)
24	SRGB007N02	Belt, Loading Motor (1)
25	SFUGF01N03	Pulley, Loading (1)
26	SFUGF01N02	Gear, Loading (1)
27	SFKTF01N06	Knob (1)
28	SFQPF01N01	Spring (1)
29	SFUMF01N08	Lever (1)
30	SFQHF01N02	Spring (1)
31	SFUMF01N36	Prism, Lamp (1)
32	SFUMN05N04E	Record Size Detector (1)
33	SFTGC01N01	Turntable Mat (1)
34	SFTEN05N01	Turntable Platter (1)
35	SFWEN05N01	Adaptor, 45 rpm (1)
36	SFQAN05N01	Spring, 45 rpm Adaptor (1)
37	SFGBZ15R01	Belt, Turntable Platter (1)
38	SFGCF01N01	Cushion Rubber, Drive Motor (1)
39	SFMZF01N01E	Motor Ass'y, Turntable Drive (1)
40	SFUMF01N15	Spacer (1)

Ref. No.	Part No.	Description
CABINET AND CHASSIS PARTS		
46 ○	SFUPF01N04E	Cabinet (Silver) (1)
46 Ⓚ	SFUPF01N35E	Cabinet (Black) (1)
47	SFADF01N01	Front Door (1)
48	SFUZF01N03R	Rod, Front Door (2)
49	SFUPF01N14	Lever, Open/Close (Left) (1)
50	SFQHF01N05	Spring, Open/Close Lever (2)
51	SFUPF01N05	Lever, Open/Close (Right) (1)
52	SFUGF01N01	Rack Gear, Loading (1)
53	SFUPF01N09	Rail Ass'y, Loading (1)
54	SFXJF01N06	Roller (1)
55	SFUMF01N14	Spacer, Guide Rail (1)
56	SFUKF01N02	Chassis (1)
57	SFGAF01N01	Rubber Foot (4)
58	SFUMF01N19	Adjusting Piece (B), Switch (1)
59	SFUMF01N13	Adjusting Piece (A), Switch (1)
60	SFQAD34N01	Spring, Adjusting Piece (1)
61	SFGZF01N01	Cushion Rubber, Chassis (1)
62	SFEB4BT20	Tube, Leads Clamper (2)
63 [XA]	SFUMF01X07	Rear Cover (1)
63 [Other Areas]	SFUMF01N07	Rear Cover (1)
64 [M]	SFNNF01M01	Name Plate (1)
64 [E, EC]	SFNNF01S01	Name Plate (1)
64 [XA]	SFNNF01X01	Name Plate (1)
64 [EK, XL]	SFNNF01G01	Name Plate (1)
64 [Other Areas]	SFNNF01R01	Name Plate (1)
65 [M, XL, XA] ⚠	SFDJHSC0491	AC Socket (1)
65 [Other Areas] ⚠	SFDJHSC0516	AC Socket (1)
67	SFGCF01N02	Cushion Rubber, Power Transformer (2)
68	SFXJF01N02	Shaft, Open/Close Lever (2)
69	SFDJC06N02	Jack, Synchro Rec (1)
70	SFDJF01N07	Jack (Left), Phono Output (1)
71	SFDJF01N06	Jack (Right), Phono Output (1)
72	SFUMF01N37	Spacer, Open/Close Lever (2)
SCREWS, WASHERS AND NUTS		
N1 Ⓢ	XTV3+10BFN	Screw, ⊕3×10 (16)
N2 Ⓢ	XTV3+6BFN	Screw, ⊕3×6 (15)
N3 Ⓢ	XTS3+8B	Screw, ⊕3×8 (5)
N4	XYN3+F8FYS	Screw, ⊕3×8 (3)
N5	XTN4+15J	Screw, ⊕4×15 (2)
N6 Ⓢ	XTN3+25B	Screw, ⊕3×25 (2)
N7	XYE3+EJ8	Screw, ⊕3×8 (1)
N8	XTWS3+10TFZ	Screw, ⊕3×10 (4)
N9	XTN2+8J	Screw, ⊕2×8 (1)
N10	XYN3+C5S	Screw, ⊕3×5 (1)
N11	XYN26+C5	Screw, ⊕2.6×5 (2)
N12	SFXGC07-01	Screw (3)
N13	SFXGQ11N01	Screw (3)
N14 Ⓢ	XTS3+6B	Screw, ⊕3×6 (7)

Ref. No.	Part No.	Description
N16 Ⓢ	XTV3+8BFN	Screw, ⊕3×8 (12)
N17 Ⓢ	XTN3+8BFZ	Screw, ⊕3×8 (3)
N18 Ⓢ	XSN3+18	Screw, ⊕3×18 (1)
N19	SFXNF01N01	Nut, φ4 (1)
N20	XNC3HS	Nut, φ3 (1)
N22	XWE4A8BW	Washer, φ4 (2)
N23	SFXW122-01	Washer (2)
N24	XUC3FY	Washer, φ3 (2)
N25	SFPEV0Q601	Screw, Cartridge (1)
N26	XTN17+4J	Screw, ⊕1.7×4 (1)
N28 Ⓢ	XTN3+6B	Screw, ⊕3×6 (2)
ACCESSORIES		
A1 [M]	SFNUF01M01	Instruction Book (1)
A1 [EK]	SFNUF01G01	Instruction Book (1)
A1 [XL, XA]	SFNUF01X01	Instruction Book (1)
A1 [EG]	SFNUF01R01	Instruction Book (1)
A1 [EF]	SFNUF01F01	Instruction Book (1)
A1 [Ei]	SFNUF01I01	Instruction Book (1)
A1 [Other Areas]	SFNUF01S01	Instruction Book (1)
A2	SFDHN05N01	Phono Output Cord (1)
A3 [M] ⚠	SFDAC05M01	AC Cord (1)
A3 [XL] ⚠	SFDAC05L01	AC Cord (1)
A3 [EK] ⚠	SFDAC05G02	AC Cord (1)
A3 [XA] ⚠	SFDAC05X02	AC Cord (1)
A3 [Other Areas] ⚠	SFDAC05E02	AC Cord (1)
A4	SFXZV05N01	String, Safety Part (1)
A5	SFXGV05N04	Hook, Safety Part (2)
A6 [XA] only ⚠	SFDKI19118	2 Pin Plug (1)
PACKING PARTS		
P1 [EF] ○	SFHPF01C01	Carton Box (Silver) (1)
P1 [Other Areas] ○	SFHPF01M01	Carton Box (Silver) (1)
P1 Ⓚ	SFHPF01M07	Carton Box (Black) (1)
P2	SFHHF01N01	Pad, Front (1)
P3	SFHHF01N02	Pad, Rear (1)
P4	SFHDF01N01	Pad, Top (1)
P5	SFHZF01N01	Clamper, Tonearm (1)
P6	SFHKN05N01	Clamper, Turntable Platter (2)
P7	SFYH45×60	Polyethylene Bag, Unit (1)
P8	SFUMF01N16	Clamper (A), Transport (2)
P9	XTV4+15JFYB	Screw, Clamper (A) (2)
P10	SFUMF01N17	Clamper (B), Transport (2)
P11	SFNZB62M01	Sheet, Turntable Drive Belt (1)
P12	SFYP20A15	Sheet (1)
P13	SFYF30A35	Polyethylene Bag, Turntable Mat (1)
P14	SFYF09A10	Polyethylene Bag, Safety Part (1)

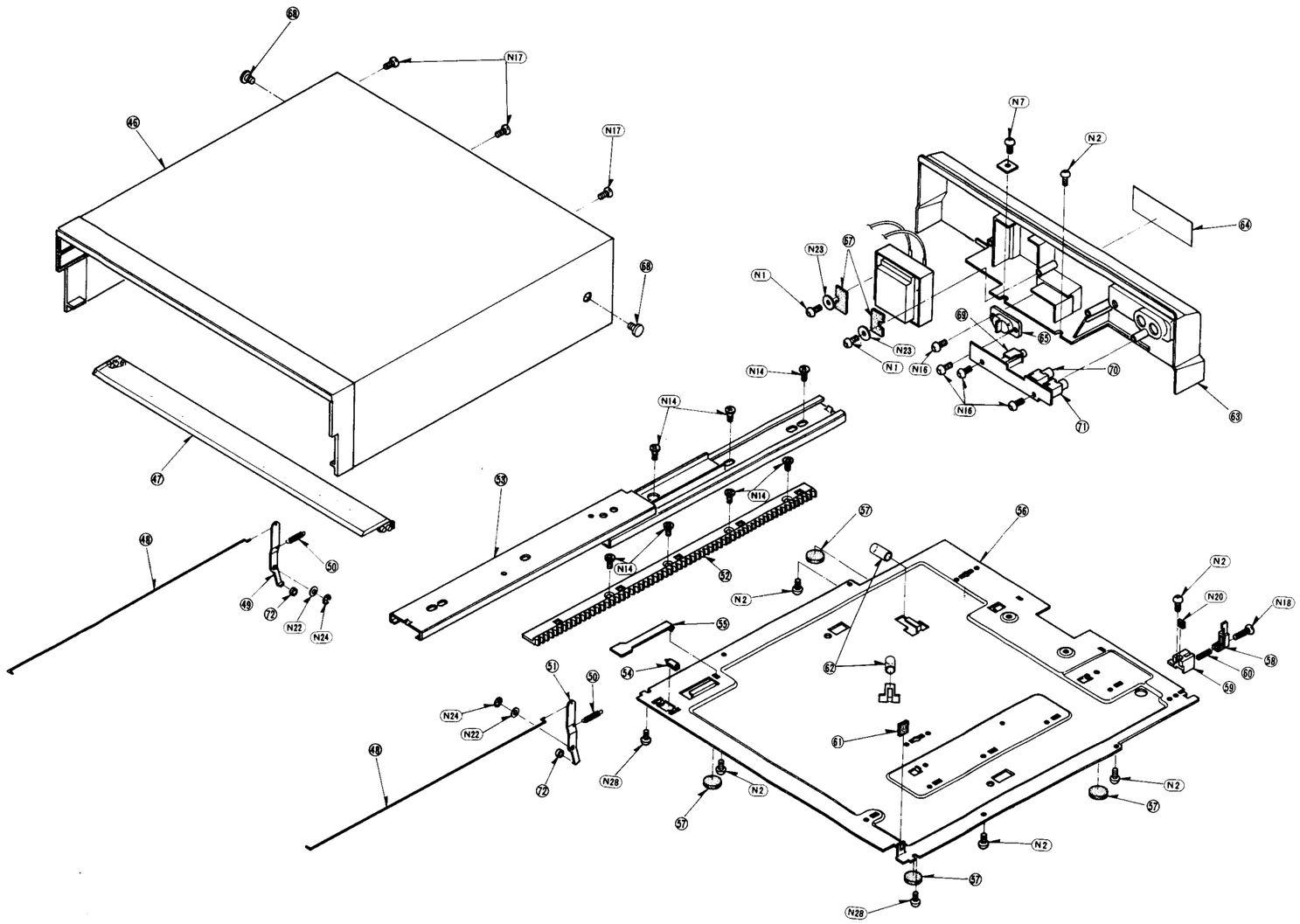
■ EXPLODED VIEWS

- **Main Unit Parts**

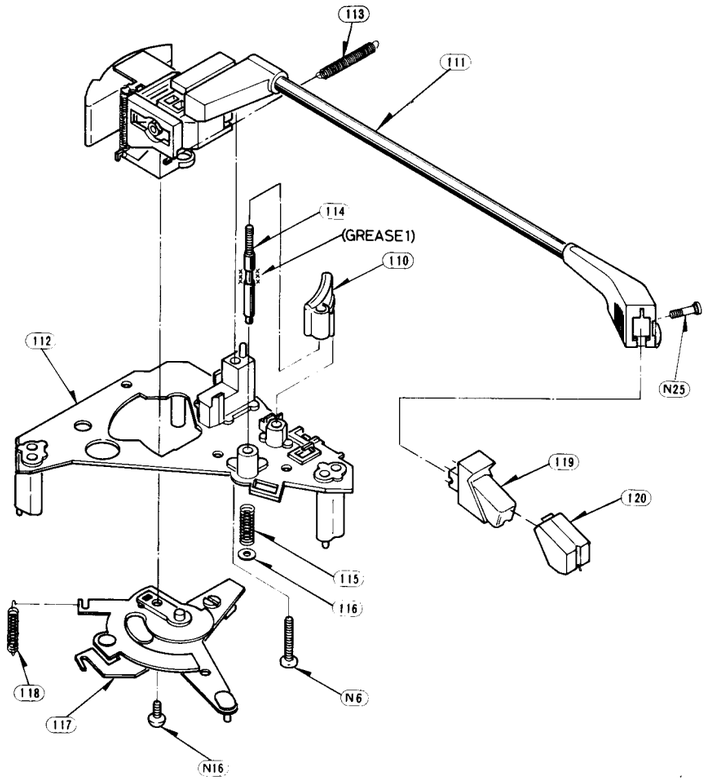


SL-F1 SL-F1

- **Cabinet and Chassis Parts**



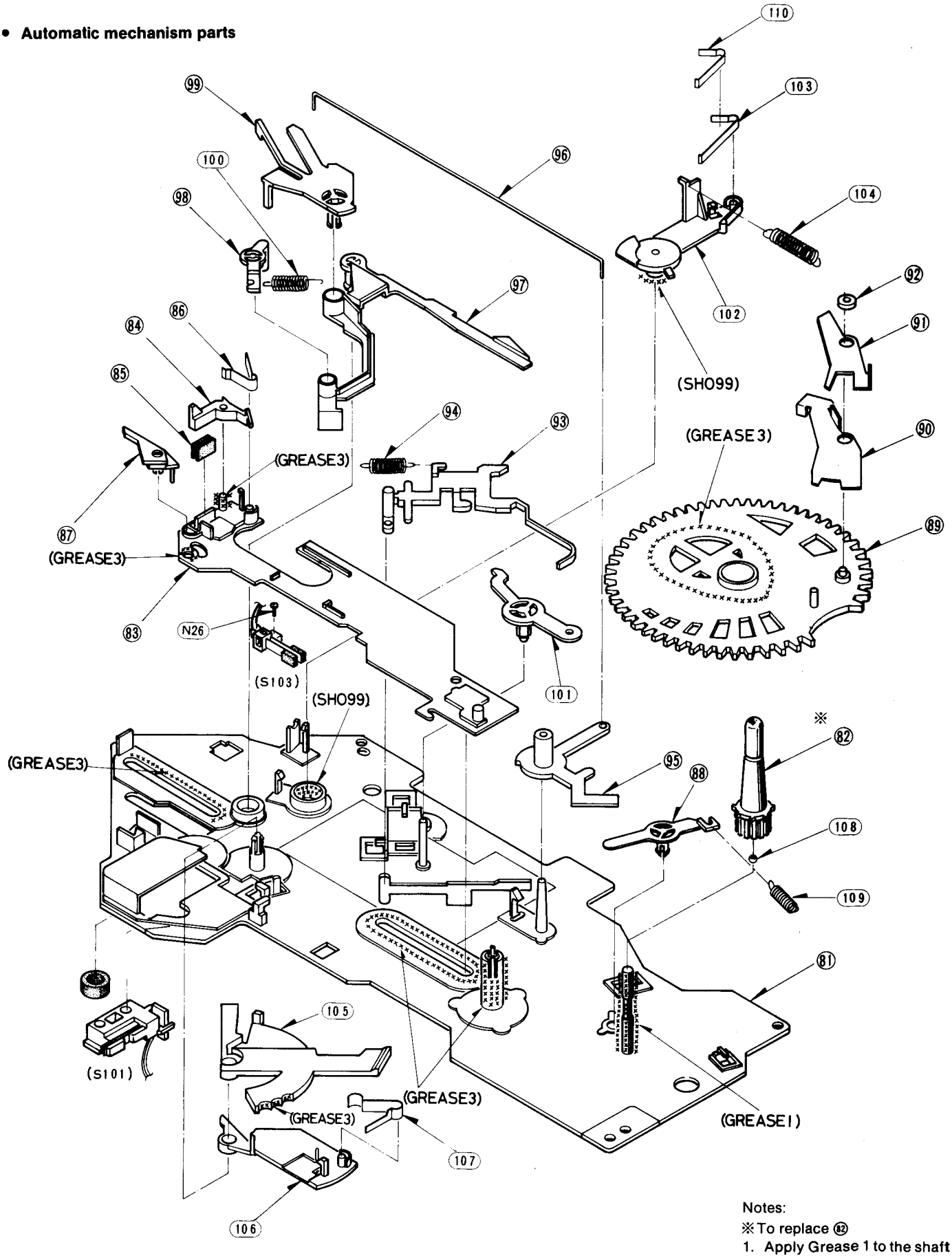
- **Tonearm parts**



Ref. No.	Part No.	Description
81	SFUKN05N52E	Base Ass'y, Automatic Mechanism (1)
82	SFTUN05N01E	Center Spindle (1)
83	SFUBN05N51	Drive Plate (1)
84	SFUMN05N51	Motive Piece (1)
85	SFGZB63M51	Rubber, Return (1)
86	SFQPN05N52	Spring, Motive Piece (1)
87	SFUMN05N62	Sub Drive Plate (1)
88	SFUMN05N63	Lever, Gear Setting (1)
89	SFUGN05N52	Main Gear (1)
90	SFURZ15R51	Rink, Main Gear (1)
91	SFURN05N52	Rink, Main Gear (1)
92	SFUMZ15R61	Stopper, Rink (1)
93	SFUMN05N52	Lever, Start (1)
94	SFQHN05N52	Spring, Start Lever (1)
95	SFUMN05N53	Actuating Plate (1)
96	SFUZN05N51	Rod, Actuating Plate (1)
97	SFUMN05N64	Lever, Switch (1)
98	SFUMN05N65	Sub Plate, Switch Lever (1)
99	SFUMN05N55	Control Plate (1)
100	SFQHN05N53	Spring, Switch Lever (1)
101	SFUMF01N23	Lever, Cueing (1)
102	SFUMF01N22	Cam, Cueing (1)
103	SFQPF01N03	Spring (1)

Ref. No.	Part No.	Description
104	SFQHF01N03	Spring (1)
105	SFUMN05N58	Index Plate (1)
106	SFUMN05N59	Sub Plate, Index (1)
107	SFQPB63M53	Spring, Index Plate (1)
108	SFYB-5-32	Ball, Center Spindle (1)
109	SFQHN05N58	Spring, Gear Setting Lever (1)
110	SFQPF01N04	Spring (1)
TONEARM PARTS		
110	SFUMN05N60R	Tonearm Lift (1)
111	SFPAMN0502A	Tonearm Ass'y (1)
112	SFUPN05N51E	Tonearm Base (1)
113	SFQHF01N06	Spring, Canceller (1)
114	SFXJN05N51	Shaft, Tonearm Lift (1)
115	SFQAZ15R51	Spring (1)
116	SFXWZ15R51	Stopper (1)
117	SFUPN05N52A	Fixing Plate, Tonearm (1)
118	SFQHN05N56	Spring, Fixing Plate (1)
119 Except for [M]	EPC-P30S	★Cartridge (1)
120 Except for [M]	EPS-30CS	★Stylus (1)

- **Automatic mechanism parts**

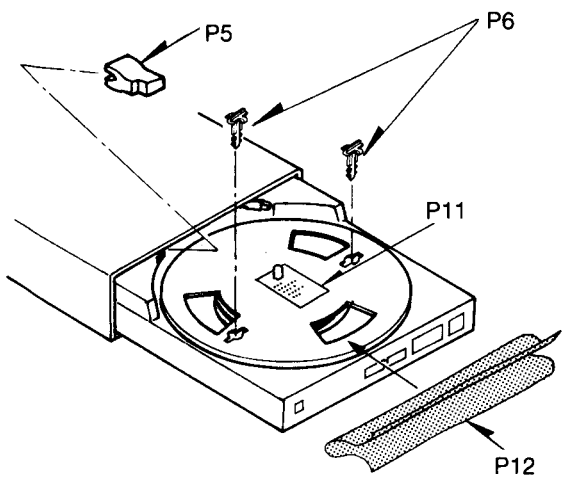


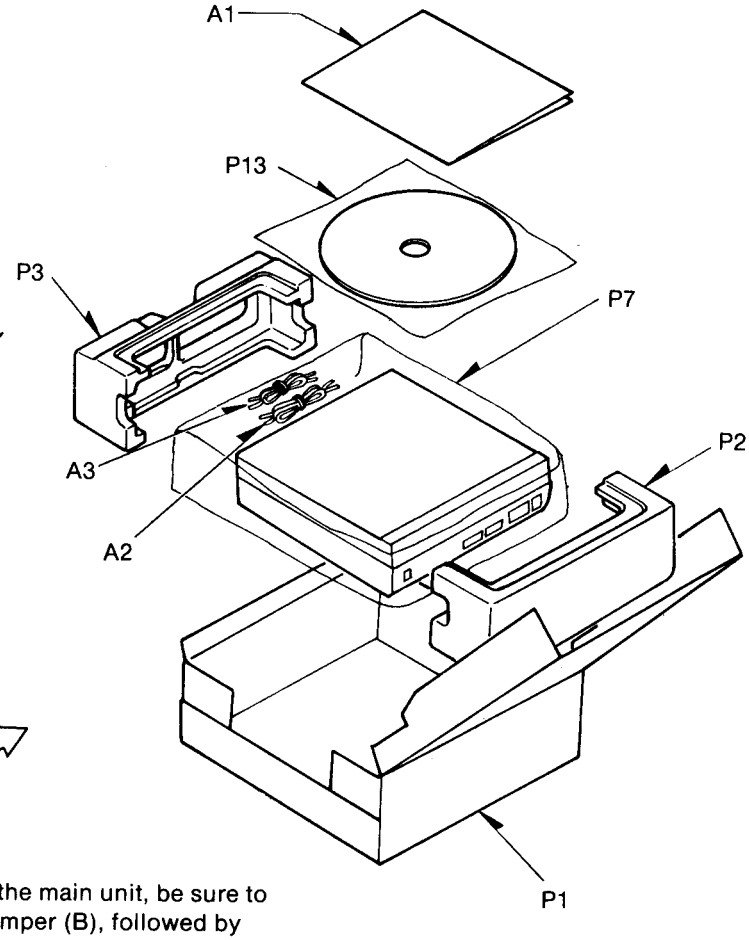
Notes:

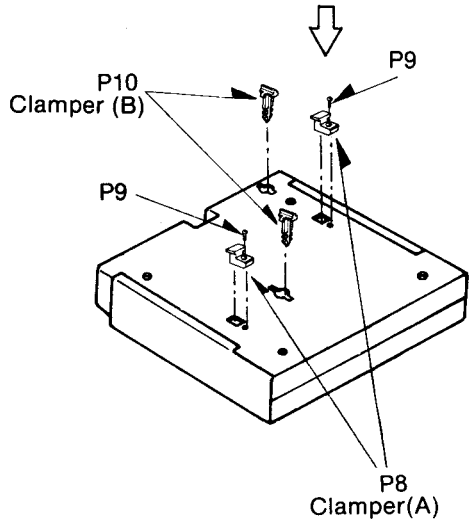
※To replace ⑧②

1. Apply Grease 1 to the shaft of ⑧①.
2. Insert108into ⑧②, and fit it to the shaft of ⑧①.

■ PACKINGS

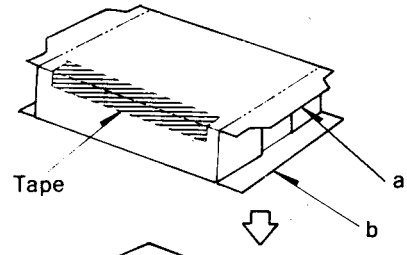


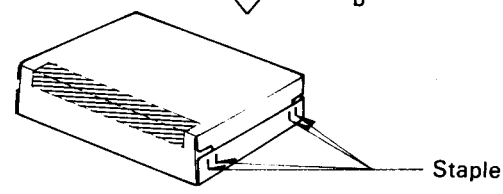


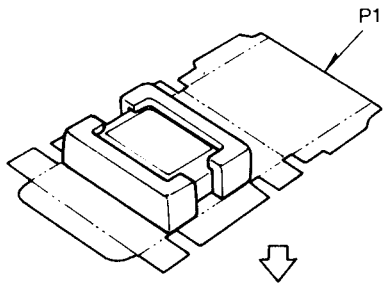


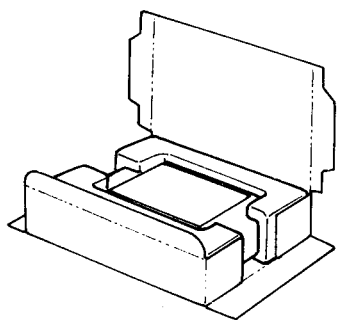
Note:
To clamp the main unit, be sure to secure clamper (B), followed by clamper (A) with screw.

1. Place the unit (with cushions attached) as illustrated.
2. Fold the flaps according to the line marks.
3. Seal the top with adhesive tape.
   * Use gum tape or adhesive cloth tape of at least 50mm wide.
4. For the edges, first fold flap "a" and then flap "b", and staple. Remember to staple only flap "b". (Use 15 or 16mm staple.)

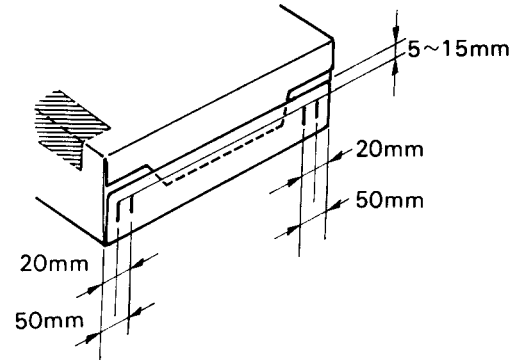








*Stapling positions are shown below.



Printed in Japan
840806000 Ⓢ TK/HY